MARCH 1961
VOLUME XIV, No. 3 • ISSUE No. 55

The Review of Metaphysics

A PHILOSOPHICAL QUARTERLY

ARTICLES

Peter A. Bertocci, *The Moral Structure of the Person* . 369
Robert S. Hartman, *The Logic of Value* 389
A. R. Lacey, *Is Life a Dream?* 433
Clive Ingram Pearson, *Ideas and Images* 452
Tsu-Lin Mei, *Chinese Grammar and the Linguistic Movement in Philosophy* 463

CRITICAL STUDIES

Alvin Plantinga, *Things and Persons* 493
J. B. Schneewind, *Knowledge and Choice* 520
Francis H. Parker, *Classical Realism and the Integration of Knowledge* 543

PROBLEMS AND PERPLEXITIES 565

BOOKS RECEIVED

Joyce E. Mitchell and Staff, *Summaries and Comments* 566

ANNOUNCEMENTS 575

ARTICLES

THE MORAL STRUCTURE OF THE PERSON

PETER A. BERTOCCI

I. *The Nature and Scope of Personal Will*

A. *The Person as the Matrix of Choice*

THE FOLLOWING DISCUSSION of free will and moral obligation presupposes certain other convictions about the nature of a person. I shall, therefore, first sketch briefly what I mean by "person."

1. A person is a unique, indivisible, but complex unity of sensing, feeling, desiring, remembering, imagining, thinking (and willing and oughting). These interpenetrating activities are phases of a self-identifying agent capable of self-consciousness. There is also a subconscious phase of this continuant agent or personal self.

2. This personal agent, though not identical with bodily events, interacts with its body. Many qualities in mental experience are affected by bodily events; if psychosomatic medicine is to be taken seriously, the quality of bodily function is affected by the quality of mental demands.[1] The personal agent interacts with the space-time world by way of its body, but the interpretation and evaluation of any event is, in the last analysis, dependent on the appraisal made by the thinking person. Here begins the drama of the life of choice.

3. The moral life begins with reflective conflict. It does not begin at the point where desires conflict. For desires do not, as

---

[1] Paul Weiss says that since each self is part of a man, who has a body as well, it will be "biased toward a particular body." Weiss recognizes that the self "enhances all possibilities," but can have its vision distorted by those of its own body. He urges, accordingly, that "when a man acts he must rectify this distortion or fail to act wholly as he ought." *Man's Freedom* (New Haven, 1950), pp. 201-202.

such, conflict. They simply exist, just as the appearances of the different colors do. Desires can create a maelstrom of conative traffic in consciousness. But they conflict only for an agent who, remembering past involvements and consequences, now interprets the course of their action as leading to ends which he does not approve. Only a self-conscious being can experience conflict and face the problem of deciding what to do about it.

4. Any decision or choice, furthermore, takes place within a complex personal matrix that includes *unchosen givens*. There are, for example, sensory qualia and the order of these qualia. They set the stage for learned perceptual significance. But there are also unlearned, *given* affective-conative qualia and their order.

Imagine three castaways in a life-boat, in the throes of thirst, hunger and fear. They cannot do anything about the psychic tone and trend in their emotional states. In their watery environment they will find themselves unusually sensitive to certain qualia and sequences and their affective-conative "sets" will influence the perceptual patterns they experience. Hastings reports, for example, that "individuals who give evidence of being relatively insecure tend, when placed in an ambiguous perceptual situation, to see objects closer to them."[2]

A choice, therefore, never means that the person is *making up* the underlying qualia or the sequence in sensory and affectional-conative responses. We do not *think* or *will* basic emotional qualia and their thrusts or trends into being any more than we think or will sensory qualia and their sequences into being. Any possible choice does not *constitute* but is *affected* by what the person has learned about these qualia and the way they may be interrelated or woven into the fabric of his life.

The matrix of choice, we conclude, is an agent who (1) is aware of what is now going on in him, (2) interprets what is happening in the light of what he believes has happened, and (3) anticipates what may happen in the future as *he* appraises the situation *now*.

5. We have no grounds for supposing that the person at any

---

[2] See George Boas, *The Inquiring Mind* (LaSalle, Ill., 1959), p. 329.

given point in his development uses all of his hereditary capacity in every way. His tomorrow will no doubt be affected by his today and yesterday. But can we say that at any specific moment he has used all that his nature allows (although this may be the case with regard to some specific problem)?

A *person*, as a Gestalt of activities, is not exhausted in his *personality*, that is, in the acquired, dynamic, and relatively systematic mode of response he has developed thus far. Yet a person's action at any specific point in his career will be affected by the personality-structure he has acquired to date. However, the fact that his personality can and does change means that, given his capacities, he can alter the modes of adjustment he has made in the past.

This does not mean that the person is an *homunculus* behind and within the acquired, developing personality. It means that the personality does not develop itself. The personality takes the shape made possible by the native powers of the person as he seeks to express himself in interaction with the total nurturant and challenging environment. The main point is that the person is not simply a cross-roads or center of converging activities; he is himself a unified agent cutting across streams of events around him, coming to know what his own potential is, and trying to maintain himself within the concurrent events that constitute the world. There would be no problem of choice for him if he could not be self-conscious, think about his experience, and propose some lines of action among the many that are open to him in some degree.

B. *The Nature of Will-Agency*

It is exactly at this point, where thinking is involved, that analysis of personal free-will can begin. By thinking, I do not mean psychological association. I mean the process of relating ideas to each other to answer questions, or to solve problems in accordance with logical norms and some accepted criterion of truth. Concretely, the psychological process of remembering and associating are, at any one moment, filling my consciousness with images and ideas which are there before I can do anything about them.

These trains of images and ideas provide much of the raw material for, but do not, strictly speaking, constitute thinking.

The distinction between thinking and associating is critical for understanding what is involved in personal willing. For the switch from associating to thinking involves what I shall call "effort" or "will-agency." To illustrate: I am given some news about my son which, if true, places his scholastic success in jeopardy and opens him to serious social reproach. My protective sentiments are aroused and my ego is threatened. In a psychological situation like this I am invaded by all sorts of associations and, *effortlessly*, provide myself with all sorts of alternatives which would exonerate him and protect my ego. I find myself *wanting* to believe anything but that my son is guilty of the shameful deed. Indeed, I do not *want* to *think*! And, if I do start gathering the facts, I find myself favoring those which can be used for exonerating my son.

The situation is serious. If my son is exonerated, another's son will be almost certainly blamed. What is required in this situation if I am going to do any more than allow myself to take the most wanted conclusion? I command: Think! But to think I must (1) avoid logical error, carefully collect and organize all the relevant data, and (2) no matter how much I dislike each new unfavorable fact, I must develop an hypothesis which is most consistent with the data, whether it be consistent with my psychological yearnings or not.

It is here that the possibility of free-will becomes critical. To be free *in* this psychological battlefield is to become sufficiently free *from* my warring affective-conative dispositions to be free *to* think. Is my conclusion to be the result of *my* relating evidence to hypotheses as impartially as possible; or is it to be a conclusion at the end of a gruelling battle between the affective-conative tendencies in my life?

In such situations I sometimes find myself *thinking* about possible ways in which the data can be interpreted.[3] Then, as the

[3] There may be times when the forces at work are such that the *thinking* process never gets started, and if all instances were like this there would be no basis for argument.

thinking process goes on and the conclusion becomes harder to accept emotionally, but easier to accept intellectually, I still find it difficult to keep on thinking. And here is the moment at which I find myself capable of effort, of will-agency (or of an experience of "fiat" were we to use James' term).

I do not know all that goes on in me when I will to go on thinking. But in will-agency, that is, in the effortful, willing act, I am not wanting, or oughting, or thinking. Will-agency is an activity with a qualitative psychic tone of its own which makes a difference in my total awareness when it is present. In this instance, when I want both to stop associating and continue thinking, to exert effort makes it possible for me to continue the activity of thinking beyond the point where, were my battlefield left to itself, I would stop thinking. Two further comments may serve to clarify the activity of will-agency.

First, during this continuing process, I may not be able to control the data which psychological processes and environmental interaction at any moment catapult into my consciousness. And often, try as I will, I cannot bring the word that is on the tip of my tongue into consciousness. Will-agency works within the matrix of my total being at a given point of development. Nevertheless, assuming that much passage in my consciousness is beyond my agency, and that my total ability and dispositional development will control *what* I can think about, nothing can determine *for me* what I shall *think of* what is passing. C. I. Lewis says: "What we shall think about is partly within our control and partly not; but what we shall think of it is our full responsibility."[4] Again, I may not determine what happens to me, and anything that happens to me will call forth many affective-conative responses, and many associations, but my belief about what happens to me depends on what I think *of* what is happening.

Second, the possibility of arriving at a *truthful conclusion*, as opposed to a *dénouement*, depends on my being able to sustain the process of relating data to conclusions. In emotionally charged situations, my effort or agency has to be sustained every step of the

[4] C. I. Lewis, *The Ground and Nature of the Right* (New York, 1955), p. 26.

way to the conclusion. Yet, assuming that I have arrived at a truthful verdict, there is no assurance that I shall take the action consistent with it. The exertion of agency will have to continue in the resultant matrix from moment to moment.

It is clear, then, that will-agency exists, and, as such, alters the problem-matrix in a way that would not occur did it not exist. But will-agency may not in fact have the *power* (will-power) needed either to continue the thinking-process to an evidence-warranted conclusion, or to put the conclusion into action.

We shall need to say more about the distinction between will-agency and will-power. Here we emphasize what seems an undeniable, *prima facie* datum of experience, which constitutes the basis for our conviction that we are *free within limits* to make a difference in what will occur to us, although we cannot be sure at any one time how much difference our agency can make.

The amount of effect that agency can have, the power of our will-agency, must not decide, however, the question whether we have any agency or freedom. For we cannot tell how much effect our agency can have until we have initiated the sustaining action or tried to initiate a new process, as when one tries, say, to break a habit. To will at all is to be free from and to be able to be free to make some effect. To will at all is to will freely, but my will-power is the degree of efficacy in a given situation. Will-power is a joint-product of my will-agency and all the factors psychological and otherwise in the choice-matrix. Paul Weiss says: "No man is so fixed and solid in nature that he can be sure just how much *strength of will* he will exhibit later." [8]

We must stop to examine a very interesting passage by Professor Blanshard. He grants that "no amount of dialectic seems to shake our feeling of being free to perform either of two proposed acts." But he explains this stubborn intuition thus:

> The first reason is that when we are making a choice our faces are always turned toward the future, toward the consequences that one act or the other will bring us, never toward the past with its possible sources of constraint. Hence these sources are not noticed. Hence we remain unaware that we are under constraint at all. Hence we feel free from such constraint. The case is almost as simple as that.

---

[8] Paul Weiss, *op. cit.*, p. 230. (Italics added.)

> When you consider buying a new typewriter your thought is fixed on the pleasure and advantage you would gain from it, or the drain it would make on your budget. You are not delving into the causes that led to your taking pleasure in the prospect of owning a typewriter or to your having a complex about expenditure. You are too much preoccupied with the ends to which the choice would be a means to give any attention to the causes of which your choice may be an effect. But that is no reason for thinking that if you did preoccupy yourself with these causes you would not find them at work.[6]

But I must demur even against so clear-headed a thinker as Blanshard. This fact (that in making a choice I am always facing toward a future, and that I am not aware, therefore, of the stealthy constraints actually bearing down upon me), might suffice to explain *a belief* that I am free *from* and *to*. But, if my description is correct, it does not describe *the experience* of *effort*. Nor will it explain away the *fait primitif*, the actual experience of effort.[7] The feeling of agency is not reducible to "the feeling of an open future as regards the choice itself," as Blanshard seems to imply.[8] No doubt the agent *believes* that the future is somewhat open, but to say that our experience of free agency is possible "*because* we are not aware of the forces acting upon us"[9] is to infer too much from the fact that "the chooser's face is always turned forward."[10]

Again, whether or not my present choice "emerges out of deep shadow,"[11] whether there are physiological or subconscious forces pulling upon me, can I explain my experience of agency here and now by such facts? Is it simply because other pulls from present and past, conscious and unconscious, are not strong enough that I now, facing the future, feel the quality of experience I call effort?

Is it not a presumptive kind of reasoning which explains my admitted experience of will-agency by the fact that I am not paying attention to the factors which supposedly are forcing the choice?

---

[6] Brand Blanshard, "The Case for Determinism" in *Determinism and Freedom* (ed. Sidney Hook, New York, 1958), pp. 5-6.

[7] See the very interesting treatment of this whole problem in Phillip Hallie's *Maine de Biran* (Cambridge, 1958), especially Chapters 2 and 3.

[8] Blanshard, *op. cit.*, p. 5.

[9] *Ibid.*, p. 6.

[10] *Ibid.*, pp. 6-7.

[11] *Ibid.*, p. 7.

The presumption is that if I could, at the moment I felt free, turn my eye backward and bring "constraining factors to light" I would no longer feel free. Granted that if I knew the factors preceding my choice to be constraining, I could not justify my belief in freedom. But, surely, whatever I feel or know about the past cannot change my actual present experience (which, indeed, could be used to cast doubt on the power of the constraint). Whatever the antecedents of the experience of will-agency, I cannot gainsay the experience itself which I hold to be the basis for belief in it. Will-agency as experienced is the making of some difference here and now to the emerging future! It is both freedom *to* and freedom from.

C. *Will-Agency as the Condition of Truth-Finding*

I continue with the strongest theoretical factor which should tip the scales in favor of belief in free-will, even if other things were equal. I should not advance this argument if there were no experience of agency, but given the experience of agency briefly described above, it can now take the center of the stage.

On what grounds can the denier of free-will ask us to believe in his conclusion? Not surely because it is ***his***, but because he believes he has been adequately assessing the evidence—that certain evidence, regardless of his past predilections or present preferences, is determining his conclusion. But can this be if his feeling of freedom is no more than the fact that he faces the future without being aware of sources of constraint? Can he trust his conclusions —and can we—if he has not been free to *keep thinking*, to keep relating evidence to hypotheses, even when to do so went against his grain?

Any rational faith in the reflective life is baseless unless human beings can plow through difficulties, interpret data and develop hypotheses in the way which makes all the difference between rationalizing and reasoning. If thinking is going to be more than having ideas flit through one's mind, lighting up this emotion and that impulse; if thinking is to be the more orderly process of logically connecting ideas with each other, with the data, and with the problem to be solved, then there must be sufficient will-agency

to initiate and continue the process of organizing varied data in accordance with the demands of experiential growing coherence.[12] C. I. Lewis says, we can trust neither ourselves nor others unless we believe that as persons we can develop the virtue of being "willing to give as much weight to what the opposition may put in evidence as to what we advance ourselves."[13]

Such conclusions have special relevance to the theory and practice of psychotherapy. Why should we, for example, trust Freud's conclusions if we cannot believe that he was able to free himself sufficiently from his own upbringing and his own hopes to develop hypotheses which illuminated *the data*? And unless any psychotherapist has the freedom to listen patiently to his client, to develop a particular theory about his client, relevant to the facts spread before him by the client, and not by his own theoretical predilections alone, on what rational grounds can the client trust his psychotherapist's conclusions?

Furthermore, what value is his therapy if the patient himself, armed with new insight, and freed from unnecessary ignorance and misinterpretations and "blocks," still has no freedom to see situations *as they are*, but only as they will appear to him in the light of the strongest psychic forces prevailing in him as he emerges from the therapeutic analysis? Unless both therapist and client are sufficiently free from their pasts, *to* listen, *to* think, and then *to* act, and to do so in accordance with the situation as it unfolds before them in theory and practice, the therapeutic process is merely one of juxtaposing psychic forces, and not one of discovering either the truth or what is best for the patient.

D. *Will-Agency and Will-Power*

A person who initiates an *approved* process (in our example, the act of thinking) invariably finds the path to success cluttered by many internal and external obstacles. To focus on the inner, these may be dispositions and habits much stronger than anticipated, and the person may find himself fighting a delaying action,

---

[12] For further discussion see my *Free Will, Responsibility and Grace* (New York, 1958), pp. 24-25.

[13] C. I. Lewis, *op. cit.*, p. 33.

a kind of moral Dunkirk. In a word, whatever free-agency a person has is never agency which operates (1) outside the basic unlearned capacities of the person, or (2) outside the particular engagement of such capacities in the more or less stable dispositions of the personality thus far developed.

For this reason, the changes in development owing to free-agency are not usually a matter of radical discontinuity with the past. A person, in will-agency, works to reorganize patterns of dispositions available to him in his total nature at a specific point of maturation and learning. He does not deploy something called "will" in the place of emotive (or other) activities. In will-agency he may favor some developed skills and habits more than others; and he may initiate the process of developing new skills and habits. But the person does not put something called "will" in the place of habit.

Will-agency, then, is the activity of the person operating to initiate new (or redirect or continue old) dispositions. The irritable individual becomes less irritable not simply because will-agency keeps him from it, but because he develops other attitudes which, by the alchemy of psychic process, discourage irritableness. Will-agency becomes a holding action, or an initiating action, at points where the approved goal has not enough support in the present dispositions of personality.

For any point of initiation or holding, there is no guarantee how far will-agency can go in achieving its objective. I can at a given moment control my anger from moving into action but then suddenly discover that I can "hold it in" no longer. Clearly I had will-agency with a certain amount of will-power, yet enough power in that situation to produce more than a delaying action. But there are times when much to my own surprise more headway is made against obstacles than I would have thought possible; more discontinuity with my past was possible than I realized.

The distinction (not separation) between will-agency and will-power reminds us that belief in free-will does not relieve us in concrete situations from deciding whether, and to what extent, a given action is free. This should dispel the concern of many that free will jeopardizes the stability of character and moral growth.

We are asked: What is the use of teaching one's children to be honest if "some arbitrary act of will" can destroy this habit by one stroke? The answer is that when such radical discontinuity is observed we must accept the fact in the context of that personality. Yet, as we know, even the most radical moral or religious conversion does not have easy going in changing the personality "overnight." The fear that will-agency could be capricious neglects the fact that will-agency always has the *power* open to it at a particular psychosomatic stage of development in a given environment.

This distinction between will-agency and will-power has relevance to the problem of fair assessment of moral responsibility, and especially where unconscious motives are involved. Thus John Hospers has written recently:

> I am only saying that frequently persons we think responsible are not properly to be called so; we mistakenly think them responsible because we assume they are like those in whom no unconscious drive (toward this type of behavior) is present, and that their behavior can be changed by reasoning, exhorting, or threatening.[14]

Now, if the analysis above is right, since we never know *how much* will-power a person will have, we can never be certain *how much* responsibility is his. Moral judgment must always be cautious and tentative. Furthermore, the way in which we can seek to change a person will have to depend upon knowledge of the dynamics of his life. I never know whether an act that I am fairly free to do is one my neighbor can do equally freely, for I do not know enough about either his conscious or his unconscious pattern of motivation.

But does the addition of unconscious to conscious forces to the choice-matrix essentially change the way in which the individual feels his responsibility? Unless we dogmatically presuppose that the unconscious controls the conscious life, any person at *his* choice-points will still be faced with the question: What can I in this situation do to achieve my goal? He may never get to the end of the thinking process. He may get to the end of it and then find that he simply cannot, in action, overcome emotional disposi-

---

[14] See *Determinism and Freedom*, 1958, p. 115.

tions developed earlier. Nevertheless, he feels responsible for what is still open to him in his specific choice-matrix.

In other words, I grant that, in any present struggle, tensions and dispositions, whose fuses extend back into my childhood experiences, may explode their charges in my face. I cannot neglect such factors in my assessment of my own future, and certainly not in assessing the behavior of others. But the introduction of underground psychic dynamics, complicating as it does the problem of assessment, does not alter the fact of responsibility. And while I may not be held responsible, or even hold myself responsible, for a given bit of behavior, I may be to some extent responsible for the ground-work from which this present action emerged.

A criminal, a neurotic, or a saint is not made all at once or once for all. There are choice-points or junctures all along the road; new growth from within, new environmental demands from without, and at most points there is the opportunity to decide what a person shall now do about what is given to him. Just as the physically maimed still have choices to make all along their path, so the emotionally handicapped have difficult choices open to them, but open nevertheless within the context of their whole lives. At some point the battle can go on, if the person decides to battle.

II. *The Nature of Moral Obligation*

A. *Obligation as Experienced*

In the first part of this essay I avoided considering the nature of obligation. The experience of will-agency needed first to be described in its own right, and now its relation with obligation can be brought out. I begin with direct exposition about the experience of obligation.

I shall use the verb "oughting" for the *erlebt* experience of obligation. Oughting, like willing, thinking, sensing, does not exist except as a focus or phase of the person. It is distinguished from *what I ought*, just as I distinguish thinking from thoughts—although, as there is no experience of thinking without thoughts, so there is no oughting without *oughts*.

I never experience oughting when I am convinced that there

is nothing I can do about a situation. I have frequently been incorrect about whether I could alter a situation, but I never feel obligated to do what I think is impossible for me to do. I do not feel any obligation to fly, to walk on my hands, to change my pigmentation, though I feel obligation, despite uncertainties and risks, to take planes, to develop a good gait, to keep a healthy color. Whenever some act is beyond my envisioned range of ability to control, I feel no obligation even to try to perform it.

The other side of this experiential shield is that when I am oughting, I never experience compulsion (must) to do anything about what it is that I feel obligated to. The word "compulsion" must be used carefully here. There are three kinds of "musts" or constraints I do not feel when I am oughting.

First, "I ought" does not mean I must in the *logical* or near-logical sense of "constraint."

Second, when I feel *I ought* I do not feel the kind of constraint "forced" upon me when I am thrown off-balance by a greater physical power. In such situations to say "I am under compulsion" means "I cannot escape the conditions imposed on me by a given form of existence once I am involved in that form." Thus, if I am to think, I must note relationships; if I am *in* a moving automobile, I must move as it moves. Such "compulsion" I call "physical constraint." When I feel I ought I may be aware of physical constraints, but to feel ought is not to feel such constraints.

Third, I ought, as felt, is not affective-conative constraint. Some would say that the experience of "oughting" is reducible to strong affective-conative constraint. But when I experience an "I ought," this experience *feels* different from the constraint I feel when, for example, "I couldn't help being afraid." Nor is it the kind of constraint that occurs when I find, for example, that no sooner have I put that melody I was singing "out of my head" than I am humming it again.

If, when I feel I ought, the experience is not one of logical or physical or conative constraint, what is it?

When I feel I *ought*, I experience a unique kind of authority. It is not the authority of power or force, though, in a phrase of

Butler's, it "magisterially exerts itself."[15] Bishop Butler further says: "Had it strength, as it has right; had it power, as it has manifest authority, it would absolutely govern the world."[16]

Kant, we also recall, urged that the moral law created respect in a person. In his analysis of respect, Kant points to a unique psychic tone in "oughting." "Respect," he says, "is a feeling [that] differs specifically from all feelings . . . which may be referred either to inclination or fear . . . though . . . it has something analogous to both."[17] Our feelings and inclinations, we may approve or even love, but moral obligation has an *imperative* quality that must be experienced to be understood. Along with Butler, Kant would urge that the power of obligation is neither fear nor love. Still it has "authority."

B. *Is the Experience of Obligation Cognitive?*

Yet both Butler and Kant, and other intuitionistic ethicists, think this ought delivers some knowledge to us. To experience obligation was to be aware of some rational or non-rational value-datum or duty. The result historically is that the fate of the experience of obligation has been tied to theories about the nature of what I ought to do. When value-data have been conceived as irreducible and unlearned givens, then the person has been endowed with a "moral consciousness" which was at once an *experience* of obligatoriness and a cognition of some duty, value, or moral principle. When, on the other hand, values have been conceived to be derived from desires and feelings as affected by the process of learning, the moral consciousness has been dethroned, and oughting has become a by-product of acculturation. What some had considered *vox dei* or *vox mei*, now became the introjected *vox populi*.

But why should the experience of obligation rest upon a conclusion about the way in which values are cognized, or what values are cognized, or even what the final nature of value-experience is? It may be as Weiss, for example, holds, that there is "an absolute

---

[15] Butler, *Five Sermons* (New York, 1950), Sec. II.

[16] *Ibid.*, p. 41.

[17] Kant, *Fundamental Principles of the Metaphysics of Morals* (New York, 1949), p. 19.

'ought to be' of which all other possibilities are fragments and specializations," and that it is of man's essence to sustain the absolute good as relevant to all that is.[18] But, the *prima facie* structure of obligation is independent of any particular theory of value-cognition. I must return to the experiential context in which obligation is felt to justify this view.

To state the conclusion first: my experience of obligation is to "the best I know," whatever that best turns out to be. For, if I am correct so far, I feel obligation only in situations in which I believe there are alternatives I can do something about. But this is the *occasion* for my experience of obligation, not the *condition*. I do not feel obligation because there are alternatives, or to alternatives as such. Yet the moment I come to a decision that one alternative is better than another, at that moment I feel obligated to that "better" alternative. I never feel obligated to do what I do not believe is the better alternative. This is an ineluctable psychological fact about human nature at choice-points, where some decision (for whatever reason) has been made about *what* is better.

I am urging, if you please, that the kind of condition obtains here psychologically which obtains when one gives assent to the understood conclusion in a logical situation. One cannot realize that a conclusion follows from certain premises without saying, intellectually, *yes*! So, if one is convinced that A is better than B, he cannot withhold the non-intellective unique response: "I ought to do A." This does not mean that he *must* do A, or that, if he does *will* A, he will succeed. It means: A *ought* to be done by me, as far as possible, whether I like to, or want to, or not.

A simple moral situation may clarify the psychological matrix of obligation. Let us assume that I am offered a chocolate sundae. (A) I want the sundae, but (B) I also want to lose weight. Assume also that (for whatever reasons) I decide that want B is better than want A. I immediately experience: "I ought to do B." I do not stop wanting the sundae, and it may be that I shall not be able to refuse it. But as long as I believe B is better than A, I feel obligation to B.

---

[18] Weiss, *Man's Freedom*, *op. cit.*, p. 203 ff. And see *Modes of Being* (Carbondale, Ill., 1958), p. 95 ff.

Never, however trivial or critical the alternatives before me may be, do I feel obligated to what in that situation I believe to be less than the best. Oughting is not an unwavering cognition of the best, but it is an unwavering magnetic thrust authoritatively demanding that the best in all choice-situations be realized.

To conceptualize this unaltering cry for quality in the choice-situation, I therefore suggest: *I ought* means "I ought to do the best I know." One does not introspect and intuit "I ought to do the best I know." but this is a generalization about the situations in which obligatoriness is felt.

Before passing, let us relate this view of obligation to competing views. On this view, for example, the contention of the ethical realist or intuitionist, that obligation is irreducible to desire, is upheld. But it is not embarrassed by the objection, leveled by opponents of intuitionism, that moral intuitions differ both in the life of the growing person, and between persons. For oughting is not tied once and for all to any specific value-datum, but to what is deemed best in every choice-situation.

At the same time, our view accounts for the fact that our sense of obligation is no less resolute because we have changed our verdicts about the best. Thus, the person who moves from a non-pacifist position to that of a nuclear pacifist feels equally obligated to his new conviction. "I ought to do the best I know" preserves the integrity of moral heroes, without minimizing their disagreement about moral issues.

In sum, the imperative to the best is absolute, whatever the best turns out to be. Obligatoriness does not depend on the will of God or of society, but it is a person's response to his decision that a given alternative is the best or better in the conceived situation. What the theistic absolutist, social relativist, naturalist, or emotivistic views of obligation never explain adequately is the imperative felt by the individual toward what *he* believes is the best even when it does jar with what is, or has been deemed to be, the will of God, the nature of man, or the cultural norm.

C. *Is Obligatoriness Acquired?*

We must now face the contention that the feeling of obligation may well be the psychological residue of the accommodation of an individual to his culture. This matter has been discussed elsewhere,[19] but the brunt of my psychological objection to this view can be put in the form of a question. Can a million introjections of "you must, if" into the life of the most suggestible child ever produce an iota of ought? Any theory of identification, introjection, or conditioning, whereby the demands of parents and society become the interiorized censor of a person who by definition has no feeling of obligation—any such theory explains the emotional constraint or release one feels when he has obeyed or discharged these fixed demands. But do such theories explain "ought," with its peculiar psychic (non-must, non-want) tone? I am not denying that musts and external sanctions are interiorized, and that they form important constituents in personality. But I ask: By what psychological miracle or alchemy do such musts become not specific oughts, but oughting?

Our meaning will be clearer as we call attention to the emotional states which accompany oughting-experiences in contrast to must-experiences. For if I disobey the dictate of my interiorized conscience—assuming now that it became fixed in me without critical approval or disapproval—I may indeed experience the lurking anxiety that the interiorization was to avoid. But anxiety is not guilt. Feel the psychic tones of the two. The essential components in anxiety are fear and uncertainty in fusion. But when I feel guilty, do I feel anxious? Is the experience of guilt any blend of fear? For myself I can only say that the psychic distance between fear and guilt is so great that I wonder how acute thinkers could have confused the two and used the terms "anxiety" and "guilt" interchangeably. It is true that I can experience both guilt and anxiety together, but it is also true that I can experience anxiety without guilt, and guilt without anxiety!

For example: If I were condemned to prison or to death for

[19] See my "A Reinterpretation of Moral Obligation," in *Philosophy and Phenomenological Research* VI, (1945).

an action which I did not do, or for one which I did but believed to be right, I would certainly feel anxiety. But I would not feel guilty. Social and legal disapproval would stir up many disturbing affective-conative states which would keep me reconsidering my grounds for what I felt to be right. But social disapproval is different from that gnawing feeling of guilt that, often far from tumultuous, grinds away and makes it hard for me to live with myself. When I decide I ought to do it, and then do not do what I can about it, there comes that feeling of having let myself down, whether I have let others down or not. One may feel miserable, but not necessarily guilty, about the hurt he may have caused others. Moral guilt has an ache much different from the agony of anxiety. In sum, anxiety is not guilt; anxiety may stem from many internal affective-conative learned dispositions. Guilt springs alive the moment I do not try to do what I decided was best.

Conversely, "moral approval" is not "social approval," though it may be compresent with it. How often a man has the approval of even those he admires and yet does not feel that inner "self-approval" which comes only when he has done what he thinks is right. There is one thing neither God nor man can give or take away, as Job so well knew—that feeling which comes when one knows he is doing all he can to realize what he believes to be right. The results for himself and for others may leave much to be desired. His may be the tortured spirit of one who knows that what he is doing is hurting loved ones who might suffer less, or not at all, if he ceased his own struggle for right. The path of duty is a self-*righteousness* that can always be accused of *self*-righteousness.

III. *Conclusions*

It is now time for us to pull together the strands which compose the essential moral structure of the person. Starting where we have finished, we may see that structure revealed as a person confronts a situation in which, of wants (or values) seen to be conflicting, he decides that A is better than B (according to whatever theory of value he holds). The moment he decides that A is better than B, he feels the obligation to do A. B may have social approval and even be the alternative to which his own personality

up to this point has been predisposed. The making of the decision and the enacting of it involves initiatory will-agency, which may or may not have the power needed to make the proper changes.

Let us say, for example, that the religious convictions of one's childhood and of the family circle are at stake. His parents will be bitterly disappointed if he breaks with his past, and many deep affections will be threatened. So strong is the pull of the past upon him, and so much does he hate to have his parents hurt, that he has a difficult time thinking straight, and holding himself to the careful sifting of relevant factors. At no point is he sure that he is correct, but, we assume, he believes that a reasoned decision, however incomplete, is better than any other. Hence, he feels the obligation to think, and wills to think and continue thinking despite the affective-conative dispositions that make it difficult to assess the evidence before him. If he stops thinking, if he knowingly allows his conclusion to be improperly influenced by his predispositions, he will feel guilty, though snug in his sense of parental approval. If he wills to think, he will need to do battle with the anxieties that well up within him.

Let us assume that his will-agency does find the power to think through to an intellectual verdict contrary to that of his childhood. Shall he tell his parents, shall he affiliate with a church closest to his present convictions, shall he take the new moral stances publicly, and shall he now start the reconstruction of habits and building of virtues hitherto foreign to him? If he believes that all these actions are to any extent within his power and that they are consistent with the new value-pattern now accepted, he feels obligated to act; there can be no other "line of duty."

The future is indeed "open" to him, but the experience he feels, as he begins to will the best he knows, is one of generating, or bringing into being. In this instance his oughting and his willing are in harmony. He does not know whether his will-agency does indeed have the power, given the configuration of conflicting forces within and the patterns of power that will emerge as he proceeds, but he knows that he ought to will the best, as far as possible. There will be disappointment and sorrow as some cherished goods must go, and there will be the torture that since he may not be

right, he perhaps might hurt others. But there will be also, in the midst of this tumult and anxiety, that sense of moral approval that comes only to those who will the best they know as far as is possible to them. He may not in fact have the will-power that he had hoped he had, and he will now experience inner disappointment. Yet even in the midst of such failure, having lost a moral battle, he will feel *blessed*, though not content or happy.

Thus reflective thinking, willing, and obligation always stand at the broken and ragged edges of the moral battle-line in the development of personality. The person coming to reflect on givens, native and acquired, in his life, finds that he does not know how far he can go both in thinking and in conscientious action. But the moral magnetic needle keeps pointing to the best, though it alone can move him not. At this point the person wills to effectuate the best; and his only sense of achievement may come in knowing that for him, if failure must come, it shall at least come here.

Boston University.

THE LOGIC OF VALUE

ROBERT S. HARTMAN

THE STUDY of the logic of value is the study of the *pure form of value*. The scientific system which is concerned with this study is the system of Formal Axiology.[1]

Formal axiology, as does every scientific system, stems from the unfolding of its axiom or axioms. The axiom of formal axiology is the following: *Value is the degree in which a thing fulfills the attributes contained in the intension of its concept.* "Fulfillment" means the possession by a thing of a set of properties corresponding to the set of attributes in the intension of its concept.[2] A thing is good if it possesses *all* the properties in question. The development of this axiom constitutes an axiological system, which establishes the dimensions of value, a hierarchy of value, a language of value and a logic of value.

In the present paper, we shall be concerned with *the axiometric structure of intension*, that is, the nature of the *sets of attributes* called "intension" and the nature of the *values*, arising from the fulfillment of these sets by things which exemplify them.

There are three kinds of sets of attributes, depending on the number of attributes in question: finite sets, denumerably infinite sets, and non-denumerably infinite sets. The three kinds of sets

---

[1] This notion originated with Husserl and was developed by Theodor Lessing. See Edmund Husserl, *Formale und transzendentale Logik*, Halle, 1929, pp. 121 f.: "Since the Summer semester of 1902 I have tried to develop systematically the idea of a Formal Axiology and its practice, both in my own lectures and seminars, and in connection with other logical and ethical lectures. . . ." Also *Ideas*, London, 1931, pp. 330, 405 ff. Theodor Lessing, *Studien zur Wertaxiomatik*, Leipzig, 1914. Also cf. Max Scheler, *Der Formalismus in der Ethik und die materiale Wertethik*, Bern, 1954, p. 102.

[2] By "attribute," or "predicate," we mean the name of a property. On the notion of "fulfillment" of meanings see E. Husserl, *Logische Untersuchungen*, Vol. II, 2, Halle, 1921 (*Sixth Investigation*). Also *Ideas*, Sect. IV, Ch. 2, and *Erfahrung und Urteil*, Hamburg, 1948, *passim*, especially Part I, Ch. II and Part II.

determine three kinds of concepts: finite sets are intensions of *synthetic* concepts, denumerably infinite sets are intensions of *analytic* concepts,[3] and non-denumerably infinite sets are intensions of *singular* concepts. The fulfillments of the three kinds of concepts give rise to three kinds of value, *systemic* value, *extrinsic* value, *intrinsic* value.[4]

1. *The Synthetic Concept*

The intension of the synthetic concept consists of a finite—and definite—number of attributes: it is a *definition*.[5] Its intension

---

[3] The terms "synthetic" and "analytic" refer to concepts, not to judgments. This was the original use of these terms by the natural philosophers, especially Galileo and Newton. "As in Mathematicks, so in Natural Philosophy, the investigation of difficult Things by the Method of Analysis, ought ever to precede the Method of Composition. This Analysis consists in making Experiments and Observations, and in drawing general Conclusions from them by Induction, and admitting of no Objections against the Conclusions, but such as are taken from Experiments or other certain Truths. . . . By this way of Analysis we may proceed from Compounds to Ingredients, and from Motions to the Forces producing them; and in general from the Effects to their Causes, and from particular Causes to more General ones, till the Argument end in the most general. This is the method of Analysis: and the Synthesis consists in assuming the Causes discover'd and establish'd as Principles, and by them explaining the Phenomena proceeding from them and proving the Explanation." (Newton, *Opticks*, London, 1730, p. 380. Cf. E. W. Strong, "Newton's Mathematical Way" in *Roots of Scientific Thought*, Philip P. Wiener and Aaron Noland, eds., New York, 1957, pp. 412-432. On Kant's subsequent application of the terms to judgments see Robert S. Hartman, "The Analytic and the Synthetic as Categories of Inquiry," in *Perspectives in Philosophy*, The Ohio State University, 1953, pp. 55-78). The Kantian use of both "analytic" and "synthetic"—but not of "synthetic a priori"—refers to judgments composed of *analytic concepts*. These concepts are sets of attributes. (See H. Vaihinger, *Commentar zu Kants Kritik der reinen Vernunft*, Stuttgart, 1881, Vol. I, pp. 254 ff. On Kant's predecessors in this respect see C. I. Lewis, *Survey of Symbolic Logic*, Berkeley, 1918, Ch. I.)

[4] For approaches to valuation based on the fulfillment of (analytic) concepts see Stuart Hampshire, *Thought and Action*, New York, 1960, Ch. 4, and J. O. Urmson, "On Grading," *Mind*, Vol. 59, 145-169 (1950), also in *Logic and Language*, A. G. N. Flew, ed., Vol. II, Oxford, 1953, pp. 159-186. Also cf. Kurt Baier, *The Moral Point of View*, Ithaca, N. Y., 1958, Ch. 2.

[5] In the synthetic sense of Kant. See Robert S. Hartman, *op. cit.*

has the *characteristic number*[6] *n*. A thing which possesses a set of properties that correspond to the set of attributes in its definition is the kind of thing defined by the definition; a thing which does not possess this set is not such a thing.

2. *Systemic Value*

Synthetic concepts give rise to *systemic value*: a thing has systemic value if its concept is synthetic and it possesses all the properties contained as attributes in this concept.

This means that the valuation of a systemic thing consists of only two values: perfection or nullity, value or non-value. Thus, a geometric circle either is a circle or is something else, but there is no good or bad geometric circle.

The systemic thing, in and as a logical structure—e.g., a geometric circle, but not a circle on a blackboard—is given to us by its synthetic definition. If it does not fulfill it, it disappears as such a thing. In other words, since according to the axiom of value, a thing is good if it fulfills the intension of its concept, a systemic thing always is good as it always fulfills its concept by definition, or if it does not fulfill it then it is not the thing in question. Such "goodness" we call Perfection. Its opposite is non-value, which also means non-existence.

Systemic Value is the formal pattern of systemic valuation. Systemic valuation is all valuation which knows only the two values in question. It denies all degrees of value and sees things as either white or black. All such valuation reduces the things valued to elements in a system, to which the things either belong or do not belong. Humans, valued systemically, either conform or are liquidated—physically, economically, legally, depending on the system in question. If they do not belong, they do not count. In totalitarian systems, where the entrance requirement is birth, the sanction for non-conformity is death. In the economic system, the entrance fee is wealth, and the sanction is poverty. In the legal system, all kinds of entrance requirements are established, from

---

[6] The notion of "characteristic number," in the sense used above, is by Leibniz, *Toward a Universal Characteristic*, 1679.

birth certificates to passports to marriage licenses. Without a birth certificate a person is not legally born, without a passport he does not legally exist, and without a marriage license he is not legally married and lives as a bachelor with a spinster.

Each system has its own language which is not the language of everyday. Marriage, legally, is "a contract made in due process of law by which a man and woman reciprocally agree to live with each other during their joint lives, and to discharge towards each other the duties imposed by law on the relation of husband and wife." There are no human relations in legal marriage, only legal relations. Hence, the legal marriage must not be confused with ordinary marriage. Similarly, any ordinary empirical thing, event or situation has its systemic counterpart with which it must not be confused. Lilac does not mean the same as *Syringa vulgaris* and "When *syringa vulgaris* last in the door-yard bloom'd" does not mean the same as "When lilac last in the door-yard bloom'd." *Syringa vulgaris* does not bloom, it pullulates, and lilac does not pullulate, it blooms. Hence, "lilac" is not synonymous with *syringa vulgaris*; and "brother" is not synonymous with "male sibling." I cannot be "my male sibling's keeper." *Syringa vulgaris* belongs in the botany books, "male sibling" belongs in the law books—and such constructs are reductions of the corresponding empirical realities. Confusing the two leads to transpositions and is bad.[7] The transposition between systems and human beings is the stuff of tragedy, from *Antigone* to Menotti's *The Consul*. Such tragedies are between protagonists of systems and human beings. What counts in a system is the system and its procedures. This goes not only for the system's victims but also for its agents. They act as elements of the system and as nothing else. The system, as a body of legal rules, lends their actions both justification and sanction. In its highest culmination this leads to honest excuses of criminals to have acted "only on order"—such as SS guards burning women and children in oil—yet crying at the death of a canary. It also leads to the "double standard" of military virtue. As an element of a system the soldier

[7] See below Sections 7,8.

is rewarded for deeds for which in civilian—that is, everyday empirical—life he is hanged.

3. *The Analytic Concept*

The intension of the analytic concept consists of a denumerably infinite—and indefinite—number of attributes. It arises from the abstraction of the common properties of a group of things. Each one of these properties must be abstracted by itself, which means that the abstracted properties are discrete and denumerable in the mathematical sense. Since such abstraction, theoretically, can be continued *ad infinitum*, the series of abstracted or analytic properties corresponds, in the mathematical sense of one-to-one correspondence, to the cardinal number $\aleph_0$. The analytic concept has the *characteristic number* $\aleph_0$.[8]

The cardinal number $\aleph_0$, the actual infinite, must be distinguished from ∞, the potential infinite. The latter represents the act of counting, the former the theoretical but never actual result of that act.

Both infinites have their counterpart in analytic abstraction. Potential infinity corresponds to the act of abstracting; actual infinity corresponds to the result of that act: the totality of common analytic properties—either of one class or of all classes—is a theoretical totality which can never be reached through acts of abstraction. The totality of analytic properties common to a certain number of particular things *as possessed by one particular class member*, we call the *schema* of the class.

From the point of view of the *potential infinite*, the term "abstraction" has two senses, the extensional and the intensional. In the extensional sense it means generalization, abstraction of common properties of *more and more things*, that is, the increase of the level of abstraction; the opposite process, or decrease of level of abstraction, is that of specification. In the intensional sense, "abstraction" means finding *more and more properties* common to a given number of things. Here abstraction means differentia-

[8] For the use of transfinite numbers to characterize intensional structure see Benno Erdmann, *Logik*, Vol. I, Halle, 1907, Chs. 21, 24.

tion of, or fitting within, abstracted properties, by determination of new such properties.[9] The opposite process is that of indifferentiation, or emptying of abstracted properties, through indetermination or cancellation of new properties.

To the degree in which intensional differentiation progresses, the number of things in question diminishes, that is abstraction decreases and specification increases, while in the case of extensional abstraction, to the extent that the number of things in question increases, the possibility of discovering common properties decreases, that is, differentiation decreases and indetermination increases. Thus, abstraction and indifferentiation, and specification and differentiation, are directly proportional. Hence we have the following table:

Extension	Intension
Abstraction	Indifferentiation
Specification	Differentiation

In the sense of the *actual infinite*, abstraction means extensionally a *category*, that is, a very high concept of very broad applicability. In the intensional sense, it means the fulfilled differentiation, that is the actuality of infinite properties which, according to the definition of the analytic concept given, is *a single particular thing* defined by its schema, but not a singular thing. Between the two, the infinitely differentiated particular and the singular, exists an unbridgeable gap. There exists between them, what Nicolai Hartmann calls a "hiatus," an "abyss."[10] Such an abyss does not appear to have been seen by Aristotle. According to him, the

[9] The "whole" differentiated is the analytic definition. This differentiation is the analytic counterpart to the differentiation of the singular concept. See below pp. 408 ff. and Susanne K. Langer, "Abstraction in Science and Abstraction in Art," in *Structure, Method and Meaning: Essays in Honor of Henry M. Sheffer*, New York, 1951, p. 171-182.

[10] N. Hartmann, *Kleinere Schriften*, II, Walter de Gruyter, Berlin, 1957, p. 137.

"*atomon eidos*," or the infinitely differentiated particular, was the "*kath'hekaston*" or singular. In reality, there does exist an abyss between "atomon eidos" and "kath'hekaston": it is the abyss existing between the denumerable infinite $\aleph^0$ and the non-denumerable infinite.

An analytic concept is a chain of implications. This chain begins with the concepts contained in the analytic intension, continues in the definitions of these concepts, then in the definitions of these definitions, the definitions of the definitions of the latter definitions, and so on *ad infinitum*.

Thus, the process of differentiation (intensional specification) is infinite in both directions, the intensionally abstractive direction (differentiation) and its opposite, the direction of indifferentiation. In the extensional sense, the same happens; the processes, both abstractive and specificatory, are infinite.

The predicates contained in the analytic concept are divided in two sets: definitional predicates and expositional predicates.[11] The latter are implied in the former. The minimum set of definitional predicates consists of two: genus and species (or differentia). These constitute the definitional schema which is the same in all the members of the class. The implied or expositional predicates constitute the expositional schema which may be different in each member of the class. The definition, and the definitional schema, determine the *existence* of a thing as belonging to a class, while the exposition and the expositional schema determine its *value* as a member of that class. The particular thing is the definitional schema plus the totality of its expositional schemata. If the thing has n properties, of which 2 are definitional, the totality of expositional properties contained in schemata is $2^{n-2}-1$.

Just as the synthetic concept gives rise to systemic value, so the analytic concept gives rise to extrinsic value.

---

[11] For details see Robert S. Hartman, *op. cit.*, and "Value Propositions" in *The Language of Value*, Ray Lepley, ed., New York, 1957, pp. 197-231.

4. *Extrinsic Value*

Extrinsic value is the fulfillment of an analytic concept. A particular thing will be more or less good to the degree that it fulfills the intension of its concept or, more precisely, the exposition of its concept, since there are no degrees in the fulfillment of the definition. The definition originates a systemic value, since, as we just saw, not to fulfill it would mean losing existence as a member of the class and to fulfill it means existence as a member of the class.[12]

The greater or lesser fulfillment is shown by the expositional schema. The expositional schema is the counterpart in the thing of the expositional predicates in the concept. As this means fulfillment to a certain degree of the exposition, the expositional schema represents the extrinsic value of the thing. Since the exposition is the measure of this value, the expositional schema is that which is measured, the extrinsic value itself. It corresponds, within the thing, to the measure of the thing's value (as such, it is a primary value property of the thing[13]).

It may be thought that, since the particular thing has abstract rather than constructed or concrete existence, the more abstract the thing the higher is its extrinsic value. The opposite is true. The analytic concept is that concept in which intension and extension vary in *inverse proportion*.[14] Thus, the more general the concept, the less will be its intension; but, the less the intension the less there is to fulfill; hence, the higher the degree of abstraction, the less will be the corresponding value.

The least valuable analytic concepts, that is, those with the least potentiality for being fulfilled by valuable things, therefore, will be those with a maximum level of applicability and a minimum intension. These are *categories*—Being, Matter, Purpose, etc.,—

---

[12] This systemic value is the only one known to modern logic. It is called "truth-value."

[13] See Robert S. Hartman, "The Logic of Description and Valuation," see this *Review*, XIV (December, 1960), pp. 198 ff.

[14] This is not true for the systemic concept where extension and intension vary in *direct proportion*. See Ernst Cassirer, *Substance and Function*, Chicago, 1923, pp. 6 ff., J. D. Garcia Bacca, *Introducción a la Lógica moderna*, Barcelona, 1936, par. 49.

precisely those concepts on which ethics and other value disciplines have so far been founded. On the other hand, the most valuable analytic concepts will be those which have the maximum intension joined to the minimum extension. The limit of the analytic concept is the singular concept.[15]

The process of specification, which is an extensional process, is, as we have seen, intensionally a process of differentiation. The process of generalization or abstraction, on the other hand, is intensionally a process of indifferentiation. The abstractive process ends with the definitional predicates which as definitional—and therefore the most abstract—cover the whole particular thing; for example, the predicates "seat," "back," "knee-high" and "structure" account for the whole of any particular chair. Every addition of properties then takes place within the properties already abstracted. Thus, differentiation of a property, for example the property *back* of a chair, means enumeration of additional possible properties *of* such a property, such as horizontal, vertical, inclinable, thick or thin, hard or soft, circular, semicircular or flat, of one piece or several, these pieces being horizontal, vertical or diagonal, of wicker or wood or steel or cloth, etc. These properties are those abstracted from in the abstractive process; now, in the process of differentiation, they reappear within the frame of the definite concept reached in that process.

Selected sets of such differentiated properties constitute intensions of other more specific concepts, such as "easy chair," "sofa," "restaurant chair," "desk chair," "airplane chair," "swing," etc., whose extensions are specific classes or species of the genus "chair."

Hence, *specifications are extensions of sets of differentiated*

[15] The founding of value disciplines on intensionally empty abstractions and the implicit attribution of greater value to generalizations, and generalities (such as dogmas, slogans, ideologies etc.), than to individuals, is the reason for the weakness of both value philosophy and value practice, throughout history. All great historical crimes have been—and are being prepared to be—committed in the name of some category: an idea, an ideal, a dogma, a faith, a "cause," a "system." Cf. Castellio on the burning of Servetus: "To burn a man alive does not defend a doctrine, but slays a man." (Stefan Zweig, *The Right to Heresy*, Boston 1951, p. 182). The same thing is true of the collective incineration of men, women and children by atomic bombs.

properties, and *sets of differentiated properties are intensions of specifications*. They constitute degrees and forms of specifications.

The *definitional* schema, in expressing the degree of *abstraction* of the analytic concept, serves as a primary norm of value: within the totality of objects, that particular thing which is more specific will have more value. But once the position of the particular thing is determined within this totality, there remains the problem of determining the different values of particular things within the same class, that is, of determining the different values of particular things which possess the same degree of abstraction. For this determination the *expositional* schema must be used which shows the degree of *differentiation* of the analytic concept. For, as we have seen, the expositional schema is the counterpart in the thing of the expositional predicates, thus representing the value of the thing.

The expositional schema emerges from, and functions within, the framework of the definitional schema. The definition is the delimitation, actually empty, which potentially contains the exposition. Each expositional property fulfills more, or fills more, of this delimiting, and determinable vacuum until the vacuum is fulfilled in its totality; but this fulfillment always is fulfillment by discrete elements. Thus, even though a complete differentiation appears to be a continuity, an intellectual microscope would show gaps and divisions within it. Only in the limit of the analytic differentiation, in the singular concept, there is, as we shall see, a real continuity, without gaps or divisions.

The interrelationship between definition and exposition determines the axiometric structure of the analytic concept.

The definition of an analytic concept is an equality between a *definiendum* and a *definiens*. The latter, the definition in the strict sense, consists of two concepts, the genus and the differentia (which specifies the genus). Any analytic definition, then, consists of four terms: *definiendum* ("man"), *definitional equality* ("is"), *genus* ("animal"), and *differentia* ("rational").

Applying the theory of types,[16] every analytic definition consists of two subjects and a predicate: the definiendum and the

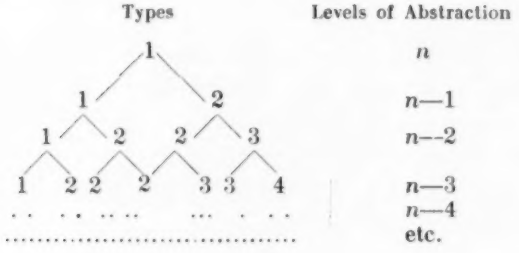
[16] J. D. Garcia Bacca, *op. cit.*, §§ 5, 9, 47, 48.

genus are the subjects, and the differentia is the predicate. Both subjects are of the same type due to the definitional equality, while the predicate is of a higher type. Thus, in the definition $D=\alpha\beta$, if D is of type one (D_1), the genus α is also of type one (α_1), while the differentia β is one type higher (β_2); hence $D_1=\alpha_1\beta_2$; or, in terms of type only, we write: "$D_1: 1=1,2$"—Definition 1 consists of an equality of types 1 and types 1 and 2.

The concepts α and β have, in turn, their own definitions. The genus of α is again of type one and its differentia of type two, while the genus of β is of type two and its differentia of type three:

$$\alpha_1: 1=1,2$$
$$\beta_1: 2=2,3$$

Developing this process of specification—which is at the same time a differential process—*ad infinitum*, we find the following sequence:



As is seen, on the highest level of abstraction, level n, there is only one property, which is of type one; on the next level, $n-1$, there are two properties, one of type one and the other of type two; on level $n-2$, there are four properties, one of type one, two of type two, and one of type three, etc. From this results the following table:

Levels Abstraction	Types							Degrees of Specification	Degrees of Differentiation
	1	2	3	4	5	6	...		
n	1							0	2^0
n—1	1	1						1	2^1
n—2	1	2	1					2	2^2
n—3	1	3	3	1				3	2^3
n—4	1	4	6	4	1			4	2^4
n—5	1	5	10	10	5	1		5	2^5
....								....	....
n—m								m	2^m

The specificatory process arranged in this second form shows something surprising: the table corresponds to Pascal's Triangle, which means briefly that the series of analytic implications corresponds to the series of the natural numbers, continuing *ad infinitum* quantitatively, and being ordered qualitatively according to the combinatorial calculus.

```
                    1
                  1   1
                1   2   1
              1   3   3   1
            1   4   6   4   1
          1   5  10  10   5   1
        1   6  15  20  15   6   1
      1   7  21  35  35  21   7   1
```

Pascal's Triangle

Thus, there is an order in the analytic structure. And if this structure corresponds to the world of discrete or abstracted properties, then this kind of world (Husserl's *Lebenswelt*) has a logical structure. The analytic pattern represents an order of the

world of everyday experience; it assigns to each property not only a place but also a value.

The degree of *differentiation* is the number of properties corresponding to, or contained in, each level of abstraction. It is the degree of the expositional determination of analytic content. On level n the content is 2^0, (the definiendum), on level $n-1$ the content is 2^1 (the definition). On level $n-2$ the content is 2^2 (the definition plus two expositional properties), and in general, on level $n-m$ the content is 2^m. The exponent indicates the level of *specification*. The singular, as a continuum, theoretically is reached on level $n-\aleph_0$, where the content is $2^{\aleph_0}=\aleph_1$. If in this case $n=\aleph_0$, the level of abstraction is either 0 or any level from 1 to $\aleph_0$, since $\aleph_0-\aleph_0$ may be any value from 0 to $\aleph_0$. In the first case—if the level of abstraction is 0—the differentiation $\aleph_1$ means the concrete individual. In the second case—if the degree of abstraction is higher than zero—it means the ideal individual: any statement used as Axiom.[17]

The *place* of a property is determined by its position in the degree of differentiation, and by the type to which it belongs. Likewise, degree and type determine the *value* of the thing. In the process of abstraction, the higher degree of differentiation potentially contains, or is the base of, the lower degrees, and its fulfillment is that of more properties. It is that which the lower degrees are abstracted from. Hence, a set of properties of a higher degree of differentiation, if actually differentiated, that is, containing the fullness of its determinations, is worth more than a set of properties of a lower degree of differentiation equally fulfilled. Thus, the set of properties of degree 2^4 is of greater value than the set of properties of degree 2^3, simply because in the former set there are more properties than in the latter. Conversely, the lack of a set of properties of higher degree of differentiation is a greater disvalue than that of a set of lower degree of differentiation. The lack, for example, of a horse's foot is a greater disvalue than the lack of his tail, but the lack of his mouth is a greater disvalue than the lack of his foot.

---

[17] Aristotle's *hyle noete*, *Metaphysics* 1036 a 9.

If of two classes, one is the specification of the other, then the objects of greater specification are more valuable, since their properties are actually more differentiated. Thus, the goodness of a horse's tail is a greater goodness than the goodness of just any tail, or the goodness of a restaurant chair is a greater goodness than the goodness of just any chair. On the other hand, the objects belonging to two different classes, for example the classes "horse" and "horse's tail," *possess the same value*, due to the fact that both concepts can be differentiated *ad infinitum*. In other words, the members of all analytic classes possess the same scale of value, characterized by $\aleph_0$.

A doubt might arise as to how the goodness of a horse's tail can be of the same value as the goodness of a horse. However, this follows from the axiometric structure of the analytic intension.

If a horse's tail and a horse, understood as members of two different unrelated classes, fulfill their respective expositional properties, then this fulfillment has the same extrinsic value, since the number of fulfilled properties in both classes may always be equal. Therefore, the goodness of a horse has the same value, as goodness, as the goodness of a horse's tail. The same occurs in the case of all other extrinsic values, such as "fair," "bad," "no good," etc.[18]

The same results are reached if we take into consideration the relation which holds between "horse" and "horse's tail." Everything that we might be able to say about the horse's tail, up to the infinity of its extrinsic properties, is part of the differentiation of the intension of the horse, which also is denumerably infinite. And precisely because of that, the goodnesses of both are the same, since an infinite part of an infinity is equal to the infinity itself.

The situation is different when we consider one of these concepts ("tail") extensionally and the other ("horse") intensionally. In this case, an object or member of one class (*a tail*)—rather than tail properties—is part of the intension, or results from the differentiation, of the other ("horse"), and an extensional part of one concept is an intensional part, or property of the other. In this

[18] Note that here formal axiology is applied not to valuation but to the value of valuation.

case, the first is *good for* the second,[19] and the value of this property *for* that which has it is a function of the degree of differentiation which the former represents for the latter. That is, a lesser degree of differentiation gives less value "for," and a greater degree of differentiation gives greater value "for." A tail is of less value for a horse than a foot.

We have here, in the relation between "horse" and "horse's tail," two entirely different kinds of value. In the first case, the class "horse" and the class "horse's tail" have the extrinsic and independent values of *goodness*, *badness*, etc. In the second case, we do not speak of the extrinsic value of the horse's tail, but rather of the value of the property "horse's tail" within the exposition of "horse"; we speak of the value "good for," but not of the value "good." While the extrinsic "goodnesses" of things are equal and mutually independent, the extrinsic "*goodnesses for*" of things are unequal and mutually dependent. We can state the following theorems: If X is good for U, then a good X is better for U than a bad X. If X is good for U, it may or may not be good for T. A good horse's tail is better for a horse than a bad horse's tail; but nothing can be asserted, on the basis of the goodness of horse's tails for horses, concerning the goodness of horse's tails for other things than horses.

Thus, the relation between "horse" and "horse's tail" is a relation of *differentiation* which leads to two different kinds of value: either to two independent "good" values or to one dependent value "good for." On the other hand, the relation between "tail" and "horse's tail" is a relation of *specification*: both are tails, but the horse's tail is a more specific tail. In this last case, there are fewer properties in the tail than in the horse's tail. After making the one to one correspondence of the properties of "tail" and "horse's tail," there remains a residue in the series of properties of "horse's tail," that is, the specific property "horse's." If both series are infinite, it would be necessary to add to the infinity of "horse's tail" this new property. We have, then, a different order within the

[19] See Robert S. Hartman, "Value Propositions" in Ray Lepley, ed., *The Language of Value*, Columbia University Press, New York, 1957, pp. 206 ff.

two infinites, in accordance with transfinite mathematics; if the infinity of properties of "tail" has the ordinal number ω, that of the "horse's tail" is $\omega+1$.

The degree of specification, or differentiation, is proportionate to the value "good for" of the set of properties in question, for the thing that has them. The set of properties of maximum specification, that is, of degree m, or of degree of differentiation 2^m, serves as standard for the measurement of all sets, $m-1$, $m-2$ etc. If the set of degree m is worth 100 percent for the thing in question, then the set $m-1$, having half as many properties—since the former set has 2^m properties and the latter 2^{m-1} properties—is worth 50 percent for the thing, or (100 percent)$/2^1$; the set of degree of specification $m-2$ is worth half again or 25 percent, or (100 percent)$/2^2$, and in general, each set of degree $m-p$ is worth 100 percent$/2^p$ *for* the thing that possesses it. Since each set has half as many properties as the preceding one in the scale of abstraction—which is the scale of specifications m, $m-1$, $m-2$ etc.—and since each set is worth half as much for the thing in question as the preceding one, each property of the thing is worth as much as each other property, *no matter on what level of abstraction or differentiation, but depending on the degree of maximum specification*. Thus, if the level of specification is m, the level of differentiation is 2^m, and if the total set of 2^m properties is worth 100 percent for the thing in question, then each property is worth 100 percent$/2^m$, and this is the value of each property on each level for the thing, since

$$100 \text{ percent}/2^m = 50 \text{ percent}/2^{m-1} = 25 \text{ percent}/2^{m-2}, \text{ etc.}$$

Thus, if $m=4$, then each property of the thing, no matter on what level of abstraction, is worth 6.25 percent for the thing in question, if $m=5$, each property is worth 3.125 percent, etc. The higher the differentiation of the thing, the less *each* property is worth *for* the thing; but the more properties the thing itself has, that is, the more differentiated it is, the more the thing *itself* is worth *for* something that has it. For this reason the horse's foot is worth more for the horse than its tail, and its mouth is worth more for it than its foot, and so on; any more differentiated part is worth more for the whole than is a less differentiated part.

The standard of the whole set of (horse) properties is, as we have seen, the set of greatest differentiation. Since this set determines the value of each and every horse property, no matter on what level of abstraction, a set of higher abstraction, that is, of lower differentiation, will have fewer properties of the same value as a set of higher differentiation. Thus, the mouth has more properties than the foot and the foot more than the tail, and all properties are of the same value for the horse. Hence the value of these respective sets of properties for the horse is proportionate to the number of properties contained in each.[20]

As there are many properties in the particular thing, all of the same value for the thing, we need a determination of the place of a property within the thing. Thus, for example, on the level of abstraction $n-4$ (degree of specification 4 and degree of differentiation 2^4) there are 16 properties which are of 5 different types, including 6 of type 3. All the properties possess the value 6.25 percent for the thing; as, for example, the well-roundedness of the back of an easy chair or the spring of the chair's seat (presupposing that these are properties rather than sets of properties). Thus, if the spring is lacking we subtract 6.25 percent of the price of the chair and we do the same if the well-roundedness of the back is defective, possibly too for lack of a spring.

In order to localize logically the place of these two different properties of the same value, we need another rule, especially when it is a matter of properties that are not only of the same degree but also of the same type. The type differentiation gives a primary indication of the place of the property; for example, in the case of a horse defined as *Equus caballus*, the properties connected with "*Equus*" are all of a lower type than the properties connected in the same way with "*caballus*," since the genus is of a lower type than the differentia.

The question then is what is the qualitative rather than quantitative, the topological rather than axiological difference, of the lack of different properties of the same degree and type. Axiologically, every lack of a property is worth the same, but topo-

[20] This does not mean that, in particular cases, certain sets of properties within a thing may not be *weighted* in a particular manner.

logically it is different. Thus, one thing is the back spring and another the seat spring. In order to resolve this problem, we need a *topological*[21] *rule*.

Each property can be expressed by its corresponding judgment: the property α by the judgment "x is α," the property β by the judgment "x is β," etc. Such a procedure can also be followed with properties of the same type and degree, for example with properties of type 2 of level $n-4$, of which there are 4. Let us call them γ, δ, ε, ζ. The corresponding judgment would then be (1) "x is γ", (2) "x is δ", (3) "x is ε", (4) "x is ζ". These four judgments we shall call, respectively, "p," "q," "r," and "s." The thing x can possess either all or several of these properties, which means that all or several of these judgments "p," "q," "r," or "s" may be true, while if it does not have any of them, they will all be false; and in the intermediate cases, in which the thing possesses some of the properties, some of the judgments will be true and others false.

Since all possible truth values of judgments can be arranged in a table which gives to each judgment its proper place, and since each judgment represents one and only one property, it follows that the table of truth values gives an exact place to each of the properties predicated of x.

The table is the following, for $m=4$:

	TYPICAL GOOD Disvalue : 0 Value : $4 \times 6.25 = 25$	TYPICAL FAIR Disvalue : 6.25 Value : 18.75	TYPICAL MEDIAN Disvalue : 12.5 Value : 12.5	TYPICAL BAD Disvalue : 18.75 Value : 6.25	TYPICAL NO GOOD Disvalue : 25 Value : 0
p	T	T T T F	T T T F F F	T F F F	F
q	T	T T F T	T F F T T F	F T F F	F
r	T	T F T T	F T F T F T	F F T F	F
s	T	F T T T	F F T F T T	F F F T	F

The possession of *all* four properties of the type and degree in question gives rise to the value *Typical Good*; the possession of more

[21] This word is here not being used in its mathematical sense as it is below pp. 409 ff.

than half of the properties, to the value *Typical Fair*; the possession (or lack) of half the properties, to the value *Typical Median*; the lack of more than half of the properties, to the value *Typical Bad*; and finally, the lack of all properties gives rise to the value *Typical No Good*. If the thing—e.g., the back of a chair—possesses the axiological value *Typical Good*, it means that the thing has a typical disvalue of 0 percent; if it possesses the value *Typical Fair*, its typical disvalue will be 6.25 percent, and so on successively according to what has been said above with respect to quantitative or axiological value.

In the example the value of m was 4, and the number of properties in question also was 4. For other values of m the values and disvalues will be the corresponding multiples of $100/2^m$, and the number of propositions p, q, r, . . . will correspond to the number of properties in question.

The subjects of extrinsic valuation are always *particular* things, that is, things in classes of at least two. Since two things presuppose empirical co-existence in space or succession in time, the subjects of extrinsic valuation include all spatio-temporal objects —objects, that is, within empirical, rather than systemic, space and time, *as such*. The star over the city can be "a good star" in the extrinsic sense of having all the empirical star properties, but not the star of astronomy. The latter is not in empirical space and time but in the physical space-time continuum.[22] On the other hand, neither of the two can be "my good star," for this is neither in empirical space and time nor in the physical space-time continuum, but in intrinsic space time—the *space* which includes paradise, utopia, the Kingdom of God, and heaven (rather than the sky), "theological space";[23] and the *time* which includes eternity, the millennium, the "fullness of time," *Hochzeiten*, honeymoons, vacations, gestations and births, Bergsonian durations. It is neither a systemic nor an extrinsic but an intrinsic value, and the fulfillment of a singular concept.

---

[22] Cf. Paul Weiss, "Art, Substances, and Reality." See this Review, XIII (March 1960), 370 ff. Also, *The World of Art*, 1961, pp. 68-9.

[23] Paul Weiss, "God and the World," in *Science, Philosophy and Religion: A Symposium*, New York, 1941, pp. 422 ff.

5. *The Singular Concept*

The intension of the singular concept consists of a non-denumerable infinity of attributes. This means that the singular thing, if it fulfills this intension, forms one uninterrupted whole or *Gestalt*. Such wholeness will be called *concreteness* and may be possessed by both sensory and non-sensory things. In the first case the thing in question is apprehended by perception, in the second case by intuition.

The singular thing has no properties in common with any other thing, it is *unique*. To extensional singularity belongs intensional uniqueness. Uniqueness and concreteness both characterize the thing that fulfills a singular intension; and, since such fulfillment is intrinsic value, both characterize intrinsic value.

The apprehension of the singular thing is apprehension of the thing in the fullness of its concretion, in its total *Gestalt*. Such apprehension presupposes a greater cognitive effort than either abstraction or construction—it presupposes the agent's appropriation of the thing, ultimately with his own total being, his making it "his own." The singular thing is ultimately apprehended by *identification*, by *interpenetration*.

The mind, as it has logically the tendency to make sense and to combine chaotic parts into significant wholes—as in the solution of a problem which, as such, is a heap of more or less unconnected items—so it has psychologically the tendency to create significant forms. These psychological *Gestalten* correspond to logical intensions; and the "closure" of a *Gestalt* corresponds to the fulfillment of an intension. Hence, according to our definition of value, it represents a value.

The continuum nature of the singular follows not only from its logical and psychological but also from its phenomenological nature. Each thing appears in diverse aspects not only to different persons but also to the same person in different modes of perceiving, remembering, expecting, etc. The singular thing *in itself* is the totality of all these aspects. As there is a denumerable infinity of such aspects, and as each aspect in turn contains an infinity of facets, the totality of all these aspects and facets, in their pos-

sible permutations, is of the cardinality of non-denumerable infinity.[24]

The singular concept, as we have seen, is the limit of differentiation of the analytic concept. The denumerable set of analytic predicates, by the process of differentiation, becomes more and more dense, approaches more and more the continuity of a line which, as a non-denumerable set, represents the intension of the singular concept. However, between the infinitely differentiated particular and the singular as a continuum we found a fundamental difference, a *hiatus*, which had been overlooked by Aristotle.[25] Today, the mathematics of transfinite numbers makes it possible to overcome this gap and see it as the well-defined difference between the denumerable and the non-denumerable infinite. While the characteristic number of the particular intension is $\aleph_0$, that of the singular intension is $\aleph_0^{\aleph_0} = \aleph_1$. This characteristic number does not mean that each singular thing appears as a form or psychological Gestalt within ourselves; for the continuum as cardinality $\aleph_1$, that is, as non-denumerability, is not identical with the continuum as form. The first is arithmetical, the second geometrical and topological. The topological definition of the continuum is different from the arithmetical definition, due simply to the fact that these definitions refer to two different objects. The arithmetical notion "continuum" refers to entities *equipollent to* the straight line; the topological notion "continuum" refers to the line itself. The word "continuum" thus is a homonym.

There are axiometric structures which are continua in the arithmetical sense and others which are continua in the topological sense. Thus, for example, man as a rational being is a continuum in the arithmetical sense. Man, theoretically, can think $\aleph_0$

---

[24] See José Ortega y Gasset, *Obras Completas*, Madrid, 1955, I, pp. 321, 475; II, pp. 19 ff.; III, pp. 199 ff., 236 f. Edmund Husserl, *Ideas*, §§ 143, 149.

[25] But not by Leibniz nor, following him, by Salomon Maimon. See Friedrich Kuntze, *Die Philosophie Salomon Maimons*, Heidelberg, 1912, p. 278. — For Maimon the intention was the differential of the schema, the schema the integral of the intension. *Op. cit.*, pp. 78, 83 ff., 328 ff., 337.

thoughts, and he can think that he thinks each of these $\aleph_0$ thoughts, and he can think that he thinks *that* he thinks these $\aleph_0$ thoughts, and so on *ad infinitum*. As there are $\aleph_0$ actions of thought capable of being thought in $\aleph_0$ levels of thought, each of these thoughts and levels combinable with all the others in any permutation possible, man's rationality, in this interpretation, is of cardinality $2^{\aleph_0} = \aleph_1$; which means that the characteristic number of man defined as rational being is $\aleph_1$.[26] Obviously, no individual can actually think all these thoughts. The demonstration of man's infinity refers to ideal man; just as no actual line can ever be of one dimension, as the definition of "line" demands, and as no real sphere can ever touch a plane in only one point.[27]

Man can also be regarded as a topological and not only as an arithmetical continuum. A topological continuum is a compact, bounded, metric and connected set, such as a sphere, a segment on a straight line, a triangle, a solid circle etc. Man as a body in space is a topological continuum. But he can also be regarded as such a continuum in time, as a process from conception to death. Although this continuum is not perceptible by the senses but resides in our mind it may yet be called a topological continuum —the temporal *Gestalt* of a person—just as musical pieces though in time rather than space may be regarded as topological continua. A topological continuum, thus, need not necessarily be the "calcomania" of a sense perception; it may be a form produced by the mind directly. In this sense Husserlian essences are topological continua; and so are geometrical figures in the Kantian interpretation.

If there are pure creations of the mind which are topological continua, then it may be possible to consider the arrangement of thoughts, seen before as an arithmetical continuum, as a topological continuum. This would signify that the rationality of man

---

[26] See Robert S. Hartman, "Four Axiological Proofs of the Infinite Value of Man," in *Examen*, No. 9, Mexico, Nov.-Dec., 1959, pp. 48 ff., and "Value Theory as a Formal System," *Kant-Studien*, Vol. 50, pp. 287-315 (1958-59). Also see Josiah Royce, *The World and the Individual*, New York 1923, Vol. I, Supplementary Essay.

[27] See W. H. Werkmeister, *A Philosophy of Science*, New York, 1940, pp. 22 f.

is seen as a compact, bounded and connected metric form. Whether this is justified or not is a problem not of formal axiology but of its application; it is a matter of penetration into the nature of human thought and its expression.[28] For formal axiology it is sufficient to state that *there are* topological continua in the human mind.

Gestalt psychology has investigated many aspects of this formative function of thought and of human perception. The task of formal axiology is that of topological interpretation of the fundamental terms of this psychology, such as "closure," "Prägnanz," etc., and their use as intensional structures.[29] It would then be possible to account for experiences of intrinsic value—such as the enjoyment of a landscape or a painting, the satisfaction of an achievement, etc.—as *Gestalten* or forms in the same way that one accounts today for simple perceptions as *Gestalten*. It would be possible, for example, to determine the exact relationships between valuations such as love and hate, grief and joy, jealousy and generosity, by defining each of these valuations as topological forms and reading off their relationships in the topological system. The intrinsic value of love, for example, would be the fulfillment of such a form, and this form would be essentially different from the individual and character forms of the two persons concerned.[30]

Supposing that the characteristic number of the singular intension is $\aleph_1$, the question now is how this cardinality can be expressed by a *set of predicates*. How can the structure of the singular intension be expressed in *logical terms*?

The intension of the singular ought to be discursive, that is, it should be constituted by individual words. Yet, the set of such words ought to form a continuous non-discursive whole. This means that the singular intension must be constituted by discur-

---

[28] See Ortega y Gasset "Expression as A Cosmic Phenomenon," *Obras Completas*, II, pp. 577 ff. Also Roger J. Williams, *The Human Frontier*, New York, 1946, and Werner Wolff, *Diagrams of the Unconscious*, New New, 1948.

[29] Such a study is at present being undertaken by Dr. Samuel Barocio of the Institute of Mathematical Research of the National University of Mexico.

[30] See, as an example, Nicolai Hartmann, *Ethics*, 1932, Vol. II, pp. 368 ff.

sive elements which are understood non-discursively, or by non-discursive elements which are understood discursively ; where by "discursive" we understand denumerability of logical elements. In sum, the singular intension is *a discursive set of non-discursive elements, or a non-discursive set of discursive elements.*

This logical formulation corresponds to the mathematical formula $2^{\aleph_0} = \aleph_1$; the non-denumerable (non discursive) set $\aleph_1$ consists of all possible arrangements of denumerable (discursive) sets $\aleph_0$. Logically this means that there must be concepts with non-discursive meanings which come about by all possible arrangements of concepts with discursive meanings.

Such concepts are *metaphors.*

A metaphor is a word of the ordinary discursive language used as a predicate with a non-discursive meaning. Its meaning is an *exposition without definition and without extension.* Thus, the expression "a peach" when used metaphorically, does not mean "*malum persicum*" (definition of "peach"), nor does it refer to the fruit of the Amygdalus tree which we eat in natural slices and after peeling; the set of predicates of the metaphorical concept ("peach") does not refer to and express that set of properties of the corresponding things (peaches). What then does it refer to and express?

Such a set, since it lacks definition as well as extension, refers to *nothing and anything.* This means that it can replace any other word of the language which does express complete extension and intension. A peach can mean a woman or a dog ("peach of a woman," "a peach of a dog") just as a dog can mean a peach ("a dog of a peach") or a woman ("a bitch"). A metaphor is a *set of predicates used as a variable.* Hence it can, in principle, replace every other word of the language—and even itself as an ordinary word rather than as a metaphor, for example, "a peach of a peach."[21] As the totality of all ordinary languages has $\aleph_0$ words, *each one* of which signifies as metaphor $\aleph_0$ senses or meanings, the total meaning of the metaphorical language is of $2^{\aleph_0} = \aleph_1$ meanings. The metaphorical language therefore is a non-denumer-

[21] See G. Evelyn Hutchinson, *Scientific Language and Religious Faith*, New York, The National Council, no date, pp. 5 f.

able infinity, a continuum. Since an element of a continuum may, itself, be a continuum, it follows that a metaphor may, itself, be a continuum.

The metaphor variable can itself be a synthetic (S), an analytic (E), or a singular (I), concept, and it can be used in either a synthetic (S), an analytic (E), or a singular (I) sense. Each kind of concept, in other words, S, E, I may be used metaphorically as S, E, or I. Hence we have the following nine possibilities of the metaphorical use of concepts, or of metaphorical value compositions:

$$S \begin{cases} S \\ E \\ I \end{cases} \qquad E \begin{cases} S \\ E \\ I \end{cases} \qquad I \begin{cases} S \\ E \\ I \end{cases}$$

An example of a synthetic word used with reference to a singular word (SI) is the expression "She is quite a number," while in "Women are sweet" (EE), an analytic word ("sweet") is used with reference to another analytic word ("women"). In "That woman is sweet," we have a different composition from the above; the word "woman" here expresses a singular concept (IE).

The axiological calculus expresses the valuation of one value in terms of another as exponentiation.[32] Thus, the valuation of "women" by "sweet" (EE) is expressed in the axiological calculus as the exponentiation of the first value by the second, which ought to be written

$$E^E = \aleph_0^{\aleph_0} = \aleph_1 .$$

All metaphorical compositions give rise to values greater than or equal to $\aleph_1$, with the exception of the combinations (SS) and (ES) which are:

$$S^S = n^n = n ; \qquad E^S = \aleph_0^n = \aleph_0 .$$

Leaving aside the finite type, which offers no difficulty, there are metaphors of cardinality $\aleph_{0_2}^{\aleph}$ and metaphors of cardinality $\aleph_1$, that is, there are metaphors of denumerable and metaphors of non-denumerable content. Only the latter constitute a continuum.

---

[32] See Robert S. Hartman, "The Logic of Description and Valuation," *op. cit.*, pp. 224 ff. and "Value Theory as a Formal System," *Kant-Studien* (1958-1959), pp. 387 ff.

The metaphor was defined as a word of the ordinary discursive language which possesses a non-discursive meaning. This definition refers exclusively to the *metaphor as continuum*. Other metaphors—those of cardinality n and $\aleph_0$—therefore will not be regarded as true but as quasi-metaphors.

We saw that the metaphor is a word which on principle can replace every other word of the language. The difference between the non-continuous or denumerable and the continuous or non-denumerable metaphor lies in the manner of this replacing. There is a simple replacement and a complex replacement. The first leads to the metaphor of cardinality $\aleph_0$—the simple quasi-metaphor; the second leads to the metaphor of cardinality $\aleph_1$—the complex or poetic metaphor.

In the simple replacement, each word of the language replaces every other word, in a simple series. If the words of the language are $a, b, c, d, \ldots n \ldots$ and each of them can signify every other word, then we have the following scheme:

$$
\begin{array}{llllllllll}
a & b & c & d & \cdot & \cdot & \cdot & n & \cdot \cdot \cdot & \aleph_0 \\
 & & & & & & & & & + \\
b & a & a & a & \cdot & \cdot & \cdot & n & \cdot \cdot \cdot & \aleph_0 \\
 & & & & & & & & & + \\
c & c & b & b & \cdot & \cdot & \cdot & n & \cdot \cdot \cdot & \aleph_0 \\
 & & & & & & & & & + \\
d & d & d & c & \cdot & \cdot & \cdot & n & \cdot \cdot \cdot & \aleph_0 \\
 & & & & & & & & & + \\
\cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & n & \cdot \cdot \cdot & \aleph_0 \\
 & & & & & & & & & + \\
\cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & n & \cdot \cdot \cdot & \aleph_0 \\
 & & & & & & & & & + \\
\cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & n & \cdot \cdot \cdot & \aleph_0 \\
 & & & & & & & & & + \\
n & n & n & n & n & n & n & n & \cdot \cdot \cdot & \aleph_0 \\
 & & & & & & & & & + \\
\cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \cdot \cdot & \aleph_0 \\
 & & & & & & & & & + \\
\cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \cdot \cdot & \aleph_0 \\
 & & & & & & & & & + \\
\cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \cdot \cdot & \aleph_0 \\
\end{array}
$$

$$
\aleph_0 + \aleph_0 + \aleph_0 + \aleph_0 + \aleph_0 + \aleph_0 \qquad \aleph_0^2 = \aleph_0 .
$$

In this metaphorical language we have $\aleph_0^2$ meanings, that is, $\aleph_0$ meanings since $\aleph_0^2 = \aleph_0$. This language is denumerable.

In the complex replacement each word $a, b, c, d, \ldots n \ldots$ not only may have the intension of every other word, but those of all these words in permutation. Thus, if again we have $\aleph_0$ words in the language, the number of possible permutations is $2^{\aleph_0} = \aleph_1$; and the metaphor, in this case, is a continuum, the same as the total language itself, since $\aleph_0 \times \aleph_1 = \aleph_1$. The scheme of this second case is the following (with an example to be explained presently):

Dorothy	Heaven	World	Heart	Etc.
a	b	c	d	$\aleph_0$
$b\,c\,d\,..\,n\,..$ $c\,b\,d\,..\,n\,..$ $d\,b\,c\,..\,n\,..$ $e\,b\,c\,..\,n\,..$ . . . . $2^{\aleph_0} = \aleph_1$ permutations $\aleph_1$ +	$a\,c\,d\,..\,n\,..$ $c\,a\,d\,..\,n\,..$ $d\,a\,c\,..\,n\,..$ $e\,a\,c\,..\,n\,..$ . . . . $2^{\aleph_0} = \aleph_1$ permutations $\aleph_1$ +	$\aleph_1$ +	$\aleph_1$ +	$\aleph_1$

The totality of language $\aleph_1$ consists of permutative elements or of groups of words in any position. If we define such *groups* as metaphors then the language of metaphors is of cardinality $\aleph_1$. A metaphor then is *any set of words associated with a word*. For, the metaphorical meaning of a word is the association of *any intension* with that word. In our second scheme *each column is a metaphor*, and hence results that each metaphor has the cardinality $\aleph_1$.

Let us take, for example, the word "Dorothy," as a word with which the one in love associates a certain set of words, such as "heaven," "world," "heart," etc. The intensions of "heaven," "world," "heart," etc., are analytic expositions and hence each of them is denumerably infinite. But when these intensions are associated with any other intensions each becomes a metaphor; when all of these are referred to one single thing, then that thing becomes unique: "Dorothy"—with all the emphasis and meaning

that this word has for the one in love. The totality of metaphorical intensions then is transformed into an intension *of* metaphorical intensions—the poetic intension of the word in question. The poetic metaphor thus is a metaphor of metaphors.

In joining a word as metaphor to a given word, such as "heaven" to "Dorothy," we understand by "heaven" the totality of all its metaphorical intensions. We associate with "Dorothy" the *column* "heaven" and not merely the *analytic definition or exposition* of "heaven." We do not see Dorothy as the astronomical subject with the properties which *define* "Heaven" or as the everyday subject traversed by birds and planes. We see all the properties which are *suggested by* "heaven," and this, precisely, is the column "heaven." If, moreover, we associate with "Dorothy" other columns, such as "world," "heart," etc., then there results something *poetic*, a metaphor of metaphors; and this again is $\aleph_1$—since $n \times \aleph_1 = \aleph_1$—but so to speak not as a line but as a plain figure or multidimensional *Gestalt*.

When we associate with a word not a column but the analytic definition of a word we have a metaphor of content $\aleph_0$, and hence extrinsic rather than intrinsic valuation (or disvaluation). For example, "Fred is an ass" identifies Fred with the analytic and indeed the systemic intension of "ass." He *is* an ass; he is not a person but a thing or a fiction, whose properties are the definite ones of asses, of *Equus Asinus*: "Fred is asinine" (E^s or S^s). Whether this has associations of value or disvalue depends on whether the valuator believes that the properties add in composition or destroy in transposition the intension of the word given. Since Fred is a person with the intensional cardinality $I = \aleph_1$, to see him as $F^s = \aleph_0$ or $S^s = n$ means a disvaluation. His personality I is disvalued in terms of E^s or of S^s ($I_{(E^s)}$ or $I_{(S^s)}$. See the following section "The Transpositional Concept.") A systemic *valuation* is the one mentioned above: "She is quite a number."

Each poetic metaphor refers to the singular and produces the unique. Hence, expressions such as "Women are sweet" mean that one sees the totality of women as unity; for the composition (E^s) results in (I) which is the fulfillment of a singular concept. One means the essence of femininity or womanhood rather than

women. If, on the other hand, one means that each woman is sweet, then one sees each woman as a singular intrinsic (aesthetic) value and means the totality of these intrinsic sweetnesses or of aesthetically intrinsic values.

A conjunction of a finite number of metaphors, then, is a poetic metaphor, or *a poem*. When John writes to Dorothy that she is his heaven, his world, his heart, his *cielito lindo*, his *sweetheart*, he writes a poem, if not in form but in essence and no matter how dull he may be, he will strive consciously or unconsciously for poetic form. Since the poetic metaphor is logically a *Gestalt*, it strives for *Gestalt*, for form expression. A poem is finite: it is a set of words of cardinality n. But *poetry* which is the *intension of* the poem, is infinite since it is the totality of metaphorical intensions contained in it.

Metaphorical language is not only the language of poets proper but of all those who want to express intrinsic value, lovers and mystics, magicians and advertisers, chefs de cuisine and politicians, theologians and scientists.[33]

The metaphor, says Ortega y Gasset, "is an indispensable intellectual instrument, it is a form of scientific thought."[34] "The metaphor is an intellectual procedure through which we are able to apprehend what is beyond our [analytic] conceptual power. . . . The metaphor is a truth, it is a knowledge of realities. This implies that in one of its dimensions poetry is *research and discovers facts as positive as those found in scientific exploration*."[35] Poetry, in other words, is the scientific instrument of intensional variability. It is the key to a realm beyond the sensory, where each meaning means more, and something other than what it means. It is, as Ortega y Gasset says,

---

[33] On the metaphorical nature of science see Ortega y Gasset, "The Two Great Metaphors." *Obras Completas*, 1954, Vol. II, pp. 387 ff. Also William Kent, "Scientific Naming." *Philosophy of Science*, XXV, 185-193, July, 1958; J. Bronowsky "The Creative Process," *Scientific American, CXCIX*, 58-65, September, 1958; and for a related subject, Edward Rosen, *The Naming of the Telescope*, New York, 1947.

[34] "The Two Great Metaphors," *op. cit.*, p. 387. Note that "scientific" here refers to both natural and moral science.

[35] *Op. cit.*, p. 391. Italics mine.

> the higher algebra of metaphors. All our other faculties keep us within the realm of the real, of what is already there. The most we can do is to combine things or to break them up. The metaphor alone furnishes an escape . . . A strange thing indeed, the existence in man of this mental activity which substitutes one thing by another—from an urge not so much to get at the first as to get rid of the second. The metaphor disposes of an object by having it masquerade as something else.[34]

This "masquerade" is nothing but the *capacity of any word to serve as symbol for any other*. The words of ordinary language, in their ordinary meaning, mirror the world of ordinary experience; in their metaphorical meaning they mirror a world beyond ordinary experience. Through the metaphor, the world of the finite symbolizes a world of the infinite.

That intensional variability of the metaphor indeed means an unlimited power of substitution of one word for another may be seen by looking at any Dictionary of Quotations, such as Bartlett's, Hoyt's, Stevenson's or *The Oxford*, and following the variety of meanings a word may take. Occasionally, simple metaphors are found in dictionaries of ordinary and technical language, such as those of the word "ass," which in these dictionaries is said, among other things, to mean a person.

6. *Intrinsic Value*

Intrinsic value, according to our axiom, is the fulfillment of the singular concept, that is, ultimately, the fulfillment of a metaphor. However, not every singular intension needs to be fulfilled. "Dorothy," when fulfilled, becomes a metaphor; but not everyone may know, or want to know, Dorothy in the fullness of her concretion, as Adam knew Eve. Dorothy may be singular and yet single; by no means seen as possessing the fullness of her possible concretion. There are, in other words, gradations of intrinsic value. Intrinsic value, as the other forms of value, may be *more or less fulfilled*. The singular concept may be more or less differentiated; but its differentiation is different from that of

---

[34] José Ortega y Gasset, *The Dehumanization of Art*, Doubleday, Anchor Book A 72, pp. 30 f. The "dehumanization" is precisely the "unrealization" of man's world by art.

the analytic concept. The singular intension may contain a single word—"Dorothy," "Ike," "I"—and yet this word may be more or less fulfilled. In its minimum meaning it is a mere point indicating a singularity.[37] In the degree of its fulfillment, as more and more properties are added to its referent, the point, like a cell, assumes a *Gestalt* which becomes more and more differentiated as the word assumes richer and richer meaning until at the maximum of fulfillment it assumes infinite concretion: the word grows intensionally from a point to denumerable to non-denumerable infinity, that is, from a label to quasi-metaphor to metaphor.

In the same degree grows the involvement of the valuer, from mere mention and observation to identification. Logically, since both singular extension and intension are continuous infinites, it follows that both can form a single continuum, that the thing and its meaning may be *one*. This is the logical expression for what we called vaguely *interpenetration* between the singular thing and its meaning. Singular apprehension is identification in the exact sense that he who knows supplies the thing's meaning and that the thing fulfills itself in him who knows. Knowledge here *is* fulfillment—intrinsic knowledge is intrinsic value, "*verum et bonum convertuntur*." In this sense, singular knowledge has been understood from the time of the prophets to our day, from Adam's knowing Eve to the modern poet's knowing his environment and making metaphors out of ordinary things. Thus, the poet Juan Ramón Jiménez, in "*Idilio*," speaks to his own mind, asking it to exercise its metaphorical capacity and give him the real nature of things:

Inteligencia, dame	Intelligence, give me
el nombre exacto de las cosas!	the exact name of things!
. . . Qué mi palabra sea	. . . That my word be
La cosa misma,	The thing itself
creada por mi alma nuevamente.	Created anew by my soul.

The differentiation of the singular, then, is that of the *degree of involvement of the valuer*: from mere perception of the singular, to familiarity with it, to final identification. The world of intrinsic value is, ultimately, the world whose meaning is infinity; and it

[37] This is Mill's "label."

appears when a mind imbues the finite with infinite meaning. In this case the finite "fulfills" the infinite. The finite then assumes infinity;[38] and in doing so it turns from the particular to the singular, from the exemplifying to the unique.[39]

At its maximum, intrinsic value means the interpenetration of the valuer and the valued, as in love, in artistic creation and appreciation, in mystic rapture, in the *satori* experience of Zen, and others.[40] In all these cases, cognition and valuation are identical: the degree of cognition is the degree of valuation. This parallelism between cognition and valuation does not appear in the other two types of valuation. Both construction and abstraction are processes detached from the person, and from which the person is detached. The fulfillment of the respective concepts does not involve the valuer. I can value a chair extrinsically and say it is a "good chair" without the urgent desire to use it; but I cannot value it intrinsically without at the same time desiring to use it, if not to live it. Thus, in Van Gogh's "Portrait of a Chair" the chair and the painter form a single unit; and the valuer enters it. He who understands this painting sees the artist's own person-

[38] In the case of the word "I" the finite singular is the self and the process of differentiation is that of self-perception, self-acceptance, self-choosing, and self-creation, described by Kierkegaard in *Either/Or*, "The Equilibrium Between the Aesthetic and the Ethical in the Composition of Personality," a process in which "his finite personality is infinitized by the choice whereby he infinitely chooses himself" (Princeton, 1944, Vol. II, p. 187). In the axiological interpretation, man as ethical personality is himself as his own metaphor: he can, theoretically, make himself into anything. Cf. Giovanni Pico della Mirandola, Oration on *The Dignity of Man*, 1486.

[39] The logical pattern of this process is found in the phenomenological degrees of intentionality, from the mere thought of the thing to the fulfillment of this thought in "evidence," in the coincidence and congruence between the various aspects of the consciousness of the thing and the thing itself, which then "gives itself in person." (E. Husserl, *Logical Investigations*, especially *Sixth Investigation*; also *Cartesian Meditations* and *Ideas*, especially pp. 136, 379 ff.; and *Formale und transcendentale Logik*, *passim*. Also cf. Susanne K. Langer, *Philosophy in a New Key*, and "Abstraction in Science and Abstraction in Art" in *Essays in Honor of Henry M. Sheffer*, New York, 1951).

[40] These experiences are "ineffable" only for those who do not understand their fusion of the finite and the infinite in metaphorical language (and action, including silence, as in the *koan* method of Zen).

ality reflected in the solitary and melancholy, yet competent and inspired presence of the chair. The same is true of Van Gogh's "The Shoes," in which Heidegger sees a world that the artist must have lived and enjoyed when he created, by *interpenetrating, and making himself one with*, a simple pair of peasant's shoes. For Heidegger the artist not only has given intrinsic value to an ordinary thing, but "has put into operation the truth of being itself." [41]

While every art may be regarded as a rendering of intrinsic value, symbolical of, and metaphorical for the reality of infinite being, it is poetry where metaphorical meaning finds its full expression. An example, where chairs and tables become symbols of love and friendship, is the poem "Cuarto" ("Room") by Juán Ramón Jiménez:

Qué quietas están las cosas
y qué bien se está con ellas!
por todas partes, sus manos
con nuestras manos se encuentran.
Cuántas discretas caricias,
qué respeto por la idea;
cómo miran, estasiadas,
el ensueño que uno sueña!
Cómo les gusta lo que a uno
le gusta; cómo se esperan,
y, a nuestra vuelta, qué dulces
nos sonríen, entrabiertas!
Cosas—amigas, hermanas,
mujeres—verdad contenta,
que nos devolvéis celosas,
las más fugaces estrellas!

How quiet are the things
and how cozy to be with them!
Everywhere, their hands
and our hands meet.
How many discreet caresses,
what respect for ideas;
how they look with ecstasy
at the dream one is dreaming!
How they like what one
likes; how they wait,
and, upon our return, how sweet
their smiles, with parted lips!
Things—friends, sisters,
women—fulfilled truth,
who eagerly return to us
the slightest flicker of shooting stars.

In this poem the metaphors follow one another in caressing discourse. Words which in common and ordinary use express the customary and everyday, here capture a whole world which seems to lie waiting, at a more profound but no less real level, for the appearance of a sensitive and attentive being to which it can manifest itself; Juán Ramón feels a great good among the things which reside in his room, and whose quietness and understanding enriches his own. The "Room," with all the beings which inhabit it, appears like something unique and singular entrusted to his

[41] Martin Heidegger, *Holzwege*, Frankfurt, 1952, pp. 22 f.

understanding. In his desire to communicate his experience, the poet has to resort to metaphorical language. The things have hands which meet with his own, there are loving touches and discreet caresses, he enjoys the things as they do him. The things know how to wait and to respect, they know how to please and how to smile. They are friends, sisters, women, *they are fulfilled truth*, that is, *value*.

This value is intrinsic value; it joins the concrete richness of the valuer to the concrete richness of the valued, in an infinity of meanings. The realm of reality to which the metaphor points is neither the systemic being of essence nor the extrinsic being of existence. It is intrinsic being, the kind of being that is "within us." It is Reality itself.[42] Metaphor is the language of the spirit.[43]

The subject of intrinsic valuation are non-empirical things, or rather, empirical things in their non-empirical aspects. They are, as such, neither in time nor in space. When a thing is regarded as unique, all there is is this thing. Since time and space are defined as succession and interrelationship of things, where there is only one thing there is no time and no space in this sense. The thing itself is the world.[44] The space-time universe, being of cardinality $\aleph_0$,[45] appears as infinitely small compared with the infinite value of the intrinsically valued thing, which is of cardinality $\aleph$. If man is by nature intrinsic value, then he is infinitely more valuable than the space-time universe. "The entire world is nothing in comparison with human personality, with the unique

---

[42] Its most authentic description is in the metaphoric situations of the Parables. See Maurice Nicoll, *The New Man*, London, 1955, especially Ch. I.

[43] For a conscious juxtaposition of metaphorical and everyday language in the Gospel see the conversation between Jesus and the woman of Samaria, John 4:7-30. Note the instructive, almost comical, effect of juxtaposing the everyday and metaphorical meanings of the words "water" and "meat."

[44] "Vale un mundo," in the Spanish expression. Cf. G. E. Moore's "isolation test." Abraham Edel, "The Logical Structure of G. E. Moore's Ethical Theory," in *The Philosophy of G. E. Moore*, Paul A. Schilpp, ed., Evanston, Ill., 1942, pp. 147, 156 ff. Edel misunderstands the non-empirical—non-temporal and non-spatial—nature of the "test."

[45] Edward V. Huntington, *The Continuum*, Cambridge, Mass., 1942, p. 32.

person of a man."[46] Human values are infinitely more important than social or material values, and hence than all efforts, political or technological, "to change the world." "The small worries of practical life—things like the reshaping of the planet—these things, no thank you, they are not for us," says Larisa to her dead friend Zhivago. "The riddle of life, the riddle of death, the enchantment of genius, the enchantment of unadorned beauty—yes, yes, these things were ours."[47]

7. *The Transpositional Concept*

We have discussed so far three types of concepts, characteristic of three types of language (the technical, the social, and the poetic) and leading, respectively, to three dimensions of value. Opposed to these three concepts—synthetic, analytic and singular—there is one more: the transpositional concept.

The logic of the transpositional concept is the logic of the transposition of the three valuational languages. It is the logic of the senseless and the absurd, of paradoxes and sophisms, of the language of dreams and neuroses, of jokes, jabberwocks, and jinnees.[48]

The synthetic, the analytic and the singular concepts were all *rational*, that is, their intensions signified or indicated something meaningful, even though it may have referred to something unreal, ideal or imaginary. The transpositional concept is an *irrational* concept. Its intension signifies or indicates *lack of meaning*. Yet, it is a legitimate concept, with its own intension and extension.

The following propositions are examples of conceptual transpositions: (1) "The number 3 is masculine"; (2) A thing can be and not be at the same time"; (3) "There is no iron on Mars." In these three examples, the attributes predicated of the subjects

---

[46] Nicolas Berdyaev, *Slavery and Freedom*, New York, 1944, p. 20. The whole chapter is an exposition of intrinsic value in our sense.

[47] Boris Pasternak, *Doctor Zhivago*, New York, 1958, p. 502. The letter from the Editors of *Novyi Mir* to Boris Pasternak of September, 1956, is a classic on the extrinsic as against the intrinsic valuation of man. See *Daedalus*, Summer, 1960, pp. 648-666.

[48] Elizabeth Sewell, *The Field of Nonsense*, London, 1952.

"number 3," "thing," and "Mars," constitute—in various ways—transpositions of concepts. They are examples of three types of transposition within the transpositional concept: nonsense, counter-sense (or contradiction), and falsity.[49]

In the first proposition, "The number 3 is masculine," the predicate and the subject are incoherent, they do not fit within the whole in question. What is predicated of the number 3 is an analytic concept of ordinary life, unsuitable to that number, which is a synthetic concept of the mathematical system. Such a proposition, we must say, is not really a proposition, for its nonsense precludes any union between subject and predicate. The proposition is neither false nor true. A nonsensical proposition is beyond the true-false opposition, and hence beyond the law of excluded middle. "The number 3 is not masculine" or "The number 3 is feminine" is equally nonsense. Other examples of meaninglessness are the following: "The Mediterranean Sea is hypocritical"; "Robert is $\alpha - 13$"; "The mathematics of the transfinite is black and red," "Green is or." This kind of transposition is intravaluational, that is, the three kinds of value are transposed.

In the statement that "a thing can be and not be at the same time," we have a new transposition: *Counter-sense (Widersinn)*. In this kind of transposition subject and predicate are coherent; the addition of "not" to the proposition would give it perfect sense. Similar contradictions are committed, for example, in the following statements: "A Pentagon has twelve sides"; "Physical being is unmeasurable"; "Houses cannot be lived in," "Bachelors are married," etc. In all these propositions the predicates contradict the *meaning* of the subject. It can be *demonstrated* that they are false, they are *formally* false. The transposition is *systemic*. What is transposed are systemic values.

Finally, in the proposition "On the planet Mars there is no iron" we have the third type of transposition: *Falsity*. Falsity is not formal but material. It could well be that there were no iron

---

[49] E. Husserl, *Logische Untersuchungen*, Halle, 1921-1928; *Formale und Transcendentale Logik*, Halle, 1929; J. D. Garcia Bacca, *op. cit.*, pp. 47 ff.; Alejandro Rossi, "Sentido y Sinsentido en las *Investigaciones Lógicas*," *Dianoia*, Mexico, 1960, pp. 91-114.

on Mars. In the propositions which err from falsity, the predicate contradicts *facts*. This kind of transposition is extrinsic. What is transposed are extrinsic values.

A *false* proposition can be refuted or corrected by *showing* the correct state of affairs. *A contra-sensical* proposition can be corrected by *demonstrating* the consequences of the subject's meaning and uniting it coherently with the predicate, by means of an affirmation or a negation. A *non-sensical* "proposition" cannot be corrected, for the respective meanings of the subject and the predicate prevent any union of the two, nor can they even be thought under any common aspect.

8. *Transpositional Value*

Synthetic, analytic and singular concepts lead, respectively, to systemic, extrinsic, and intrinsic value. The transpositional concept leads to transpositional value. Transpositional value is the pattern of disvalue. Its character is negative.

In the field of logic, the transpositional concept, as an *irrational* concept, is opposed to the synthetic, analytic and singular concepts, all of which are *rational*. In the field of value something analogous happens: systemic, extrinsic and intrinsic values are *positive* values distinguishing themselves from transpositional value which is *negative value* or *disvalue*. The relation between positive and negative value is the axiological counterpart of the logical relation between rationality and irrationality.

The logic of transpositional value, as the rule of disvalue, renders a service analogous to that rendered by Husserl's morphology as pure logical grammar. The logic of disvalue delimits fields and clarifies disordered situations just as Husserl's morphology clarifies irrational propositions. Thus, even though this type may be destructive or negative, indirectly it is constructive for it prepares the field for every positive valuational judgment. By classifying disorder it prepares for order.

In the transpositional concept, the totality of intensional attributes do not constitute a whole. There is not, strictly speaking, a transpositional intension; the attributes are fragmentary and do not succeed in forming an intensional unit. This means that

such an intension *cannot, strictly speaking, be fulfilled.* And, since value is intensional fulfillment, the transpositional intension does not lead to value. Its "fulfillment" is disvalue.

Let us first see how this could be expressed numerically, and then what it means in practice.

In logic, meaning is represented by the number "1" and falsity by the number "0". Disvalue, as we have seen, has no meaning; but neither is it all falsity. On the other hand, value is more than 1, disvalue is less. As we have seen, extrinsic value is represented by the range of numbers from 2—the minimum number of definitional properties—to infinity. *One* property does not constitute a meaning and hence can not be fulfilled (except by an action "fulfilling" an imperative, e.g., "Red!" shouted to a painter). A transpositional set of properties is *no set* of properties or is a set of *no properties*; and hence cannot be fulfilled. "1" and "0" thus represent a specific fulfillment and no fulfillment, and hence a specific value and no value, respectively.[80] We therefore let disvalue be represented by the numbers between one and zero, that is, the fractions. These fractions, since they can be systemic, extrinsic or intrinsic, give rise to the characteristic number of transpositional value $1/n$, $1/\aleph_0$ and $1/\aleph_1$, with zero as the limit.[81]

Since disvalue is a transposition, and a transposition always consists of two *values* transposed, it follows that bad does not exist as such. It is always a transposition of *values*. Everything which is, is good as such. But combinations of things can be bad. The bad is incompatibility of things: things in transposition. Formally, this means that badness indicates the lack of a positive concept to cover the things in question, that is, the lack of a concept containing the expositions of the concepts of those things in its meaning.

Thus, any good thing can be converted into something bad, that is, into a compound which is not a composition but a trans-

---

[80] The "specific value" in question—1— is that of fact. ("The Logic of Description and Valuation," *loc. cit.*) An action "fulfilling" the kind of imperative in question has the value of fact.

[81] The inverse of the transfinite has clear axiological meaning (1/E, 1/I), although the arithmetical meaning is undefined.

position, when it breaks into pieces, gets distorted, gets mixed up with something that is not in accord with its meaning, as honey with barbed wire, a bone in the throat, an inkblot on a print. Two good cars, a good Dodge and a good Ford, can form a composite which is a transposition: when they collide, they transpose mutually and the wreck is a transposition in the literal sense of the word. The result of such transposition, logically and existentially, is a bad Dodge and a bad Ford, or, more accurately, a Dodge disvalued in terms of a Ford and a Ford disvalued in terms of a Dodge, $E_{1E_2} + E_{2E_1}$ (For a more detailed analysis of this collision situation, see the next section). On the other hand, a good Dodge and a good Ford form a composition of value, E^E, when exhibited in a showroom. Such a valuational composite, in contrast to the collision, is something complete whose concept contains the exposition of the concepts of both automobiles.

The above examples are of simple disvaluations in which order becomes chaos: destruction in the empirical order, confusion in the systemic order, indifference in the intrinsic order. This type of transposition is less dangerous than the complex transposition of the rational and the irrational, of value and disvalue itself, where rationality is at the service of disorder: *the organization of chaos.* Examples of this type of transposition are, on a small scale, rationalization, on a large scale strategy and tactical thought in war, the card-indexing in concentration camps, the legal organization of brutality in penal systems, the legitimization of confusion in ideology. Such transpositions are insidious and deceptive, for their organization of chaos may appear as order. Actually, it is the deepening of disorder.

9. *Practical Application*

Let us now apply the four dimensions of value to a life situation.

Two automobiles collide, wounding their passengers. What does this mean axiologically? The collision is a transposition of value, and as such something bad, even though analytically it might be considered a "good collision" and a good transposition

of value (see below, pp. 430 f.). A collision, like every transposition, is disorder.

In terms of the three fundamental types of transposition—to which type does the collision belong?

A collision, logically, is not nonsense, but, unfortunately, makes only too much sense; nor is it a falsity for it does not contradict any facts. It is something true, unfortunately all too true. What it represents is a *contradiction*. A collision appears to postulate the proposition that two physical bodies can occupy the same place at the same time. Such a proposition contradicts the very definition of body, whose minimum definition is that of *having extension*, that is, of *occupying space*.

Thus, the contradiction "fulfilled" in the collision situation is *that two bodies can occupy the same place*; but since this proposition cannot be *fulfilled in actuality*, this very impossibility is the reason why a collision is produced and not, for example, a simple contact or caress. The contradiction is shown by the fact that the proposition becomes true merely by denying what is affirmed.

This, then would be the first valuative judgment of the "collision situation"; an axiological judgment of critical and negative character.

A second valuation, but of constructive character, would be the systemic. This valuation, in our example, is represented by the traffic police.

The collision, we said, is a transposition of value and, as such, a disorder. Within this second type of valuation, it is "disorder" in the legal sense. The collision represents the violation of certain rules of the traffic system and is valued accordingly. For the agents of the law, the driver or drivers responsible, whether injured or not, are mere lawbreakers. The human person, as such, is of no concern and only the numbers or names on the ticket or driver's license have reality.

Even though there is actually a disvaluation produced in this systemic valuation—since concrete individuals are seen as mere cogs in the gears of a system—this valuation has a constructive and to some degree indispensable function. In every situation,

whether the one we are analyzing or any other, systemic valuation is the first bulwark of order in existing chaos; it represents the first level of valuation, very low it is true, but necessary.[52]

Another type of valuation would be that of all those who saw in the automobile accident an accident like any other. This would be a matter of extrinsic valuation. The collision would be only a member within the classes of "collision," "accident," "imprudence," "danger," etc. In this dimension it could even be judged as a "good collision" or a "bad collision," depending on how the definition of "collision" was fulfilled. This type of valuation would be expressed in propositions like these: "This collision is already the third of the week at this corner," or "Lately there has been a large number of automobile accidents." The collision is a member of the class "collisions in week X," "collisions at corner Y," or "recently occurred automobile accidents." The same type of value judgment is expressed in newspaper articles in which, for example, an end is demanded to so many accidents. Again, extrinsic valuation is that of the mechanic in the repair shop or the doctor in the hospital: our damaged car would be only one more among the cars needing repair; our victims would only be some more patients among so many others.

Finally, at the highest level of valuation, we have intrinsic value. In our example, this valuation would be that of our relatives and friends, and even of persons unknown to us, who feel our pain and share our despair.

From this new level, the previous valuations appear as disvaluations, since in them the unique, the singular, the unrepeatable, is seen as a mere phase in a system or as a member among many of a given class. Hence we understand the anger of a close friend or relative of the injured over the systemic valuation of the police, the extrinsic valuation of the curious, and the intrinsic disvaluation of the indifferent. For this reason, we consider it simply just to get the injured guilty party free from the hand of the police rather than letting him pay for his guilt in prison. In

[52] Hence, conversely, whoever wants to impose a system must first produce an emergency. The procedure can be observed throughout history, and, at present, in Cuba.

this intrinsic valuation, the person as such counts for more than the violation of a traffic ordinance.

In this valuation, person and car are seen as singulars, as unique. The car itself is not one among many, even if it was systemically mass-produced. We are deeply disturbed about its fractured condition. And what couldn't we say about our injured friends, sons, sweethearts, wives or parents! To see them as mere lawbreakers or part of a class would be to disown them, to deny them; in a word, to *disvalue* them. Such an attitude would be senseless, *nonsense*, a *transposition of value* of the first order mentioned on pp. 423 f.

In the reality of our lives, the four valuational dimensions are intermingled. Thus, a policeman does not necessarily look at criminals only systemically; quite the contrary, he may come to see them with so much understanding that he finds the task of fulfilling his obligation difficult. The same may happen in the directly opposite case; someone close to the person responsible for the accident—perhaps his father or son—even though he might intrinsically value the situation, does not therefore cease to be aware of the disorder and chaos which the collision represents; on the contrary, he may feel it more profoundly. He may be aware of its simple layers, the systemic and extrinsic, the logical and the social, and the need to prevent or avoid it systemically. Thus, there appear *conflicts of value*; he may wish to have the son or father set free, and on the other hand cannot help but agreeing with the police.

This analysis of the collision situation was made in very general terms. Much more precise determinations are possible, in accordance with the value patterns in question. Thus, the transpositional aspect of the collision could be elaborated, and one could clarify not only what type of transposition is entailed, as we have done, but what the logical rules in question mean in detail. The aspect of systemic valuation entails that there are no degrees, and the example proves it in the following way: For the judicial system, the driver either is or is not guilty, there can be no intermediate position. On the other hand, in extrinsic valuation, it would be possible to indicate the degree of "goodness" of his driv-

ing, and, as we have seen, of the collision itself, from being "a very good collision" to being "a very bad collision." Such valuative gradation is clearly expressed in the payments of the insurance company: "a good collision" costs more than a "bad collision." Here, obviously, the terms "good" and "bad" are used in the axiological sense and not in the common and everyday sense, where the badness of a collision would be great in the degree that it is axiologically a "good collision." A similar variety appears in intrinsic valuation. Such valuation would reach from the mere perception of the collision to full understanding of, and even identification with, it.

In spite of its lack of detail, the example will suffice to show how the value dimensions of Formal Axiology can and should be applied in practice.[53]

10. *Summary*

These value dimensions arise from the interpretation of the term "intension" in the axiom of value, as axiometric structure. This structure depends on the number of predicates contained in the intension, which may be finite, denumerably infinite, non-denumerably infinite, or fractional. These four kinds of numbers are the characteristic numbers of, respectively, the synthetic, analytic, singular, and transpositional concept. The fulfillments of these concepts give rise, respectively, to systemic, extrinsic, intrinsic, and transpositional value. Each of these four value dimensions has its own logic, based essentially on: modern mathematical logic for systemic value; traditional (Aristotelian-Leibnizian-Kantian) logic for extrinsic value; Orteguian metaphorical and

[53] They may, of course, also be applied in theory, e.g., to philosophical categories. Thus, the value dimensions may serve as bases for modes of being, of process, etc. *Being* may be: systemically Essence; extrinsically Existence; intrinsically Reality; transpositionally Nothing (*das Nichts*). *Process* may be: systemically Possibility; extrinsically Actuality; intrinsically Creativity; transpositionally Degeneracy. Systemic ontology may be said, for example, to lead to a Spinozistic, extrinsic ontology to a Humean, intrinsic ontology to a Leibnizian, transpositional ontology to a Schopenhauerian world.

Husserlian intentional logic for intrinsic value; and Husserlian morphological logic for transpositional value. The four logics, all accounting for aspects of the axiometric structure of intension, together and in interrelationship constitute the Logic of Value.

National University of Mexico.

IS LIFE A DREAM?

A. R. LACEY

I

EVER SINCE DESCARTES wrote his *First Meditation* people have been recurrently plagued by a fear that the whole of life as we know it may not be real at all, but simply a dream; or, if not by this fear, then by the more refined fear that they ought to be plagued by it. I have called my paper, for the sake of a catch-phrase, "Is Life a Dream?" But let us start with the more modest question, might we not be dreaming now, whatever be the case in the rest of our lives? For certainly we dream sometimes, and then perhaps we are deceived. The advantage of starting here is that it escapes an objection to my title question along the following lines: How could life be a dream, for if everything is a dream, what could it mean to say this? Does not the very word "dream" imply a contrasting reality before it can get a meaning at all? This objection will turn up again later, but the fact that we can substitute our more modest question shows that it does not finally dispose of the problem.

I suppose the most obvious difference in fact between dreams and waking life is the chaotic nature of the former. But this somehow seems to be a mere contingency. Some of our dreams are more contingent than others, and it seems hard to impose any upper limit of coherence on them. Also it is usually after we wake up that they seem incoherent. Similarly many dreams are largely matters of sensation and emotion, mood and atmosphere, with little or no reasoning in them; but this again is contingent, and dreams vary; Professor Broad (Presidential Address to the Society for Psychical Research, *Proc. of SPR*, LII (February 1959), 56-57) relates a quite detailed scientific experiment which he carried out in a dream.

And anyway, is there not a knockdown argument at this stage? Dreams are, after all, copies of reality—the dream world

is a shadow world where we reproduce and recombine all sorts of experiences from our real lives. But if dreams are in this way copies of reality, why should they not be able to copy all reality—not of course at once, but why should any parts of reality be privileged as uncopiable? But if we accept this, then it will be *a priori* impossible to distinguish between dreams and waking life in terms of their content, because whatever situation is suggested to us as one that would convince us that we were awake, once that situation is allowed to be possible in real life it is equally possible that it should be copied in a dream.

Here again it will no doubt be said that the very theory that dreams are a copy of reality presupposes reality for them to be copies of. But again, too, this does not tell me whether I am *now* dreaming. Before leaving this topic, however, one should perhaps mention views, such as that of A. R. Manser ("Dreams," *PAS* Sup. Vol. 1956), that there are in fact differences in content between dreams and waking life. Manser (p. 224) thinks that dreams, like images, are "given completely," and adds:

> It is one of the peculiar features of dreams that one is never in doubt as to who a person is, or what place one is in, even though that person or place has characteristics quite different from those actually possessed by the object in question. If I can recognise anything in the dream, then I recognise it completely, even though afterwards I may be puzzled as to how I could have recognised it. . . . In extreme cases, persons and objects may have contradictory characters without this causing any surprise and without any difficulties in identification, e.g., I know it is Smith I am talking to, even though he has the face of Jones.

Now if this means merely that *some* dreams have special features not found in waking life, this again gives no guarantee that I am not dreaming now. But if it means that I can never be in a state of doubt in my dreams, or dream that I am in a state of doubt, then surely it is empirically false. The Smith-Jones case certainly often occurs, but what justification is there for saying: "I know" (rather than "believe") "it is Smith"? Or perhaps we should say the dream-person is simply a composite, who derives some of his attributes from Smith and some from Jones. As for contradictory characters, we may often feel inclined to describe a dream-experience in contradictory terms, but is the contradiction any more

radical than that which occurs in waking life when we say: "It is and it isn't raining" or (when dizzy): "The landscape is both moving and at rest"?

But we must also consider now the objection that dreams are not copies at all. Margaret Macdonald in fact ("Sleeping and Waking," *Mind*, 1953, p. 212) follows Ryle in holding that dreams cannot be copies because, *inter alia*, copies always exist in some material; a picture is made of canvas, a statue of bronze, a reflection of water, but dreams are not made of anything in this sense (we might suggest images, but images are not "things" that can serve as a material basis for something.) I cannot see how this argument proves anything except that copies do *not* always exist in some material. No doubt there are various kinds of copies, with various kinds of differences between them, one of which is that of having or not having a material substrate—but so what?

Norman Malcolm, on the other hand [*Dreaming* (1959)], thinks that so far from all segments of reality having possible copies in the dream world, none of them do. The reason for this is that we never in fact experience in a dream at all—we rather dream that we experience. Should one then say that I cannot falsely believe that I am awake, because if the belief is false I am only dreaming that I hold it? But this would be a Pyrrhic victory (cf. F. Ebersole, *Mind*, 1959, p. 341, though he comes to different conclusions) because normally a guarantee that I am not holding a false belief is also a guarantee that I *am* holding a true one, but in the present case my guarantee that I am not holding a false belief is coupled with my having no guarantee that I am holding a belief at all! Malcolm's own discussion of this (pp. 117-118) I shall return to later.

At this point we suffer an interruption from the ghost of Descartes, who asks: But surely you must be doing something —you must be able to say you really are doubting, or really are dreaming, or else you simply have not described your predicament at all.

We might, if we resented the interruption, send the ghost of Descartes scuttling back to his infernal stove by remarking not that I am really doubting, nor that I am really dreaming, but that

I am really either doubting or dreaming that I doubt. But let us instead take advantage of his interruption to ask a little more closely whether or not it is in fact true that the only thing I can do in dreams is dream that I. . . . If I doubt whether I am dreaming, it is said, the very fact that I doubt proves that I am not dreaming. But how do I know that it *is* a fact that I doubt, and do not merely dream that I doubt? Well, perhaps I do not know; but the fact that I can raise this question, i.e., doubt whether I am doubting, itself shows that I am doubting, at a higher level. But then what makes it true to say that I am doubting? That I feel certain feelings, or say certain words? But I can do this (or seem to do it) in a dream. Oh no, you cannot! I am told, you cannot *do* anything in a dream. Well, let it be that I cannot believe something in a dream. But "I believe that . . ." is surely replaceable by "It seems to me that . . .," so it would also be true that it can never seem to me that . . . in a dream. "It seems to me that the heavens are on fire, though of course I do not believe they are" it is objected. But this, I think, is only because I *do* believe they are *not*. But even if this is not so, the heavens seeming to be on fire will involve my taking them to be so, making a comparison with their being so, or in general 'doing something' in a sense at least as strong as the 'feeling certain feelings' just above.

Well then, what on earth does happen in a dream? We seem to be left with two alternatives:

(a) Dreams are quite unanalyzable in terms of happenings.

(b) Dreams are entirely constituted by our "memories" of them.

Both these alternatives seem to have serious objections to them. Let us take them in order:

(a) (i) Dreams certainly give every appearance of being happenings in a normal temporal order (with perhaps some reservations on the last point. I sometimes seem to dream that I both am about to have an experience and have already had it; but this in a "special effect" which is certainly not essential to dreams. Compare "*déjà vu*" in waking life). On the theory under consideration this would be a fact needing explanation.

(ii) We describe our dreams in temporal terms, and also use

in other ways the same language in describing dreams as in describing slices of real life.

(iii) Dreams are sufficiently like real life to have persuaded many primitive peoples that at night their souls left their bodies and had real adventures elsewhere. Others have believed that dreams, or some of them, disclose the future, or in some other way reveal what is not accessible to ordinary means of observation but *is* part of the real world.

(iv) Dreams shade into reality. There is often no very clear line between dreaming and waking.

(v) Stimuli from the waking world sometimes affect our dreams. We hear the waking-up bell as a summons to dinner.

(vi) We sometimes take dream events to have really occurred, and vice-versa.

(b) As well as objections (iv) and (v) to (a) we can add:

(i) If the only reason for saying we dreamt *last night* is that we report the dream now and did not report it yesterday, how is it we can suddenly remember, for the first time, having dreamt something the night before last, assuming this is possible, even if rare?

(ii) Phenomenally speaking a dream memory resembles an ordinary memory in that it contains an implicit claim to be about the past. On the present theory this would need explanation. Of course many ordinary memories are delusive, but there is, at any rate outside pathology, hardly a whole class of them that are delusive.

(iii) If we reject the claim of dream memories to refer to the past (last night), on what grounds do we accept other memories, as we often do, where there is no verification available? I remember my private thoughts of an hour ago.

This last point reminds one of the objection that dreams are inaccessible to verification, and so break the ban on private languages. Dreams are certainly private, but mine do not seem to involve any experiences of a different *type* from those I have learnt to describe in ordinary English. Moreover, if dreams are so private that our descriptions of them can really be only descriptions of our current imagery, what about this imagery itself? And if

dreams become inaccessible as they recede into the past, what again about mental images? But Malcolm does not seem to want to deny the existence of images, or even, I think, the legitimacy of descriptions of remembered images.

Let us now take up the question whether I am deceived in my dreams. I take it that to be deceived is to hold a false belief, and I have already suggested that at any rate as far as the experiencing goes, which is all we need, it is implausible to say that I cannot believe in a dream. To say that Smith believes . . . is often taken to imply various reactions Smith does or would make to various stimuli. How far these reactions are involved in the analysis of belief I am not sure, but in any case this side of belief does not concern us in the present discussion about being deceived.

But now let us look at the matter from another point of view. Miss Macdonald argues that I cannot be deceived if it is logically impossible to apply any test, and that in a dream this *is* logically impossible. Now with most people there are certain, usually exciting, dream situations that lead them to wake up. Could we perhaps say that the sort of test we should apply in our dream is to produce one of these situations and see what happens? But although one of these situations may act as a test if it occurs, it may well be that in the dream there is nothing we can do to produce it, especially on Miss Macdonald's view that we cannot then produce anything, but only dream that we produce it; and in this case all we could do would be to wait until such a situation happened to turn up. A similar situation exists in our waking life. If I now want to test that I am awake I pinch myself, and if the resulting pain does not cause me to "wake up" I assume I am awake. But how do I know I really pinched myself, and did not just dream I did (M. J. Baker, *Mind*, 1954, p. 540)? But this, you will say, is an argument I have cut myself off from using. For have I not rejected the distinction between feeling pain and dreaming that I feel pain, or at any rate minimized it? The test depends on the inductive rule that shocks wake me from dreams. But unless I already assume I am awake, how can I assume this rule? For though there may be little or no difference between feeling and dreaming that I feel, there is certainly a lot of differ-

ence between certain evidence existing and my dreaming that it exists, just as there is between the moon being made of green cheese and my dreaming that it is.

This example involved a rule connecting dreams and waking life. But suppose we take a rule that is neutral, say an ordinary well-established law of nature. If we test this and it holds, nothing is proved, but if we test it and it does not hold, can we not argue that we must be dreaming? The point is that while dreams are in fact incoherent but could be coherent, real life is always coherent, so that if a slice of experience is coherent it could belong to life or a dream, but if it is incoherent it could only belong to a dream.

In the first place this is again not a proper test. We are at the mercy of something incoherent turning up before we can say that we have made a test. But secondly consider what would happen if an incoherence did turn up. No doubt we might start by saying: "Good heavens, I must be dreaming!" But should we persist in this? Let us suppose the incoherences multiply thick and fast; still, since we have admitted that it is not necessary that dreams are incoherent, can we not ask whether it is really necessary, and not merely contingent, that real life is coherent? Can we say inductively: It always has been coherent, and therefore it always will be? But this is again to assume an inductive rule, and so to assume that I am awake.

But, you will say, here again I am forgetting my own position. Have I not said that even dreams *are* experiences? And if so, they why can I not apply an inductive rule to them? But if induction can be used equally concerning dreams or waking life, then why should I assume that this is a coherent dream which has suddenly become incoherent? Why should I assume that it is only dreams that can be incoherent? Perhaps it is only dreams within my dream that are so.

No test of the required nature then seems to be available—or at any rate, we have failed to find one. But does this mean that I cannot be deceived, which I think we can interpret as that my belief is senseless, and not true or false? Is it true that what cannot be theoretically verified must be meaningless?

In the first place verification is a process and relative to the verifier and his circumstances, and what possible relevance can the feasibility of such a process have to the meaningfulness of a sentence? A sentence is theoretically verifiable if it is theoretically possible to specify a method for discovering whether it says anything true or false, but though this is a sufficient condition of meaningfulness there is no reason why it should be a necessary one. I have already compared the reality of past dreams with the reality of past mental images. Malcolm thinks it is senseless to ask whether a dream was "really" different from what we remember it as being, or whether we "really" dreamt when we remember no dream. Now it surely makes sense to suppose that there is a galaxy which throughout its life is beyond the observable universe, but in what sense is its existence theoretically verifiable? All one could say would be things like: "Well, if you *could* get to the relevant region you would observe so-and-so," But this much, I suppose, one could say about dreams: "If you *could* relive your life between going to sleep last night and waking up this morning you would observe so-and-so." But in both cases we have gone beyond the notion of verifiability in so far as this refers to a process linking ourselves here and now with ourselves at the successful outcome of the verification. We have moved in fact from requiring verifiability to requiring that we should *know what it would be like* for the sentence to be true, or, as we may put it, from verifiability to specifiability. This certainly sounds more plausible as a necessary condition of meaningfulness, though even here I think problems arise over such things as counterfactuals, which, however, I pass over.

But here a fresh attack may be made on my comparison of dreams with images. *Can* I in fact "know what it would be like" to have a dream? I said above that if you relived last night you would observe . . .; but surely if you were asleep you would not be in a position to observe anything, however much reliving you did? As Malcolm might put it, I cannot know what it would be like to be dreaming, because there are no circumstances in which the sentence "I am dreaming" could be correctly used, while there are circumstances in which the sentence "I am having an image" could be correctly used. (Cf. also *Phil. Rev.*, 1956, p. 27.)

If I want to know what it is like to have breakfast I may form an image of my having this morning's breakfast and say: "There! That's what it's like to be having breakfast," and if what I image were really happening I could correctly say: "I am having breakfast," even though I am not having breakfast at the moment. Could I recall my dream and say: "There! That's what it's like to be dreaming," and if that were really happening I could correctly say: "I am dreaming," even though I am not dreaming at the moment? No, on the present view, because I can never correctly say: "I am dreaming," which in turn is because dreaming involves doing nothing else besides dreaming, while having breakfast is compatible with doing many other things, including describing my present state. But could I say: "If that were really happening a correct description would be 'Lacey is dreaming'"? No doubt I myself should not be in a position to give such a description, but other people would be. Malcolm would ask how they could know I was dreaming. Perhaps they could not, but this would merely mean they could never have conclusive grounds for giving the description (rapid eye-movements, etc., might give them some grounds: I cannot see that Malcolm's discussion of these (chapter 13) shows more than that they are not conclusive evidence). But the fact that they could not have conclusive grounds for giving it does not imply that they could not give it, or that it is meaningless; they might just hazard a guess.

But, it will be said, though this may serve to defend the legitimacy of wondering whether our memories of our dreams are accurate, it does not justify my wondering whether I am dreaming, because there are circumstances where it would be correct for someone other than myself to say: "Lacey is dead," but this hardly justifies my wondering whether I am dead, taking death to equal annihilation. Whether Malcolm would accept the Cartesian argument that my very wondering shows me that I am not dead, I am not sure; he refuses to accept this argument in the case of dreams because I might be merely dreaming that I wonder (pp. 117-118), but this argument will not apply in the case of death. He would probably reject it on the grounds that nothing can show me that I am alive, because "I am alive," like "I am awake," is as senseless

as "I am not alive (awake)," since it could only have a correct usage if it also had an incorrect usage (cf. chapter 18): he thinks that "I am awake" can never state anything, but can only *show* someone *else* that I am awake, and that "I am not awake" could do this equally well, since it is the utterance and not what is uttered that does the showing. This seems an odd argument. "Twice two is four" and "Nothing is red and green all over" have no incorrect uses unless the terms are redefined, but they surely state something. If then I hold that "I am awake" and "I am alive" (or "I exist") can make statements, and if I agree that one cannot sensibly query the latter, why do I feel justified in querying the former? The reason is that while to deny the latter is to deny conscious experience altogether, to deny the former does not involve this. For even Malcolm ties dreaming to experience to the extent of holding that what makes me say "I dreamt" is that I now have an impression of something having happened, which in fact did not happen. (Incidentally how would Malcolm distinguish between dreams and delusive memories?) But this is not what makes me say: "I was dreamlessly asleep (non-existent)." Therefore when I look back to a period when I was dreaming, or, if you like, when I contemplate this "impression" of having dreamt, what I find myself contemplating is very much more like the state of consciousness that I am now in than is anything I find myself contemplating when I reflect on the fact that I did not exist in, say, 1900. We are in fact back at our old position of asking why, if impressions of having dreamt are not memories of experiences, they look so very much as if they are.

II

So far I have argued that I cannot find any conclusive test that I can apply to discover whether I am now dreaming, but that this does not imply that the question is meaningless. We are back then with our original question: How do we know we are not dreaming? Well, what is implied by saying we *are* dreaming? I think at any rate two things, that our apparent environment is unreal, and that there is a real world into which we may wake. But what would count as waking into a real world? One would

imagine that in practice we should say that we had done so in much the same conditions that make us in fact say this when we awaken from our ordinary dreams. What we should require, then, would be something like this:

(i) An experience of "waking" with an inherent "feeling of reality" about it.

(ii) That the world into which we awoke should be rich and varied, and as coherent as, or more coherent than, this one. I have so far been treating this one as perfectly coherent, but it seems not inconceivable that a world could be more coherent than ours. Consider for instance the inadequate nature of memory, with all its gaps and distortions; in a more coherent world memory might be fuller and more reliable. An appearance of greater coherence would also be gained if natural laws were simpler than they are, i.e., if the world could be described more simply than it in fact can; whether this is possible I do not know, but it hardly seems inconceivable.

(iii) That our earthly experiences appeared to have occurred between the "waking" and the previous time we were "awake," or else between two previous waking periods—the night before last. The "night" might or might not be as long as one's earth-life; a long dream might really take years in an unconscious person.

This might satisfy us that the new world was real, but would it satisfy us that the earth was unreal? Why do we usually call dreams unreal?

(i) There is usually no connection between dreams we have on different nights.

(ii) They are very much less coherent than waking life.

(iii) They are not shared by others.

(iv) Their contents are parasitic on waking life, not only in the sense that the materials of dreams are provided by waking life (we never see a new color in a dream), but also in the sense that the actual nature of the dreams very often, though of course not always, relates clearly to some event in real life, or some facet of the dreamer's personality.

(v) The dream world would be hard to relate spatio-temp-

orally to the real world; if we did climb through the looking-glass we would simply find ourselves in the house next door!

All the first four points seem to be contingent. We can easily imagine, with Russell, a state of affairs where we spend twelve hours every night in a dream world coherent in itself and connected from night to night, and corresponding, whether because really common or by a "pre-established harmony," with the dream worlds of some or all other people. Let us call this idealized dream world D. Then D is the most favorable case for calling the dream world real.

Now consider the process, which I mentioned a few moments ago, of "waking up" into a superworld, which we will call S. If this happened, how far would our earthlife, which we will call E, resemble D?

Since there is only one "night," for E is a continuous and non-repeated phenomenon, the question of connectedness does not arise. E is fairly coherent, though not perfectly so, for the memory-system is not perfect, and we often have grounds for surprise. We might or might not find that E was shared by other members of S, or that they recounted dreams that correspond completely to E; let us assume we do not find that E was shared in this way. The contents of S might be such that it was quite plausible to regard E as parasitic upon S; the members of S might use English, etc., and many puzzling events in E might seem to fall into place when regarded as a reflection of, or commentary on, events in S that we remembered as occurring before our excursion to E.

Thus the first four of our criteria might incline us to say that E was unreal, since it satisfied less of the criteria than D. We might admit that E was remarkably coherent for a dream, though no more so than D. The case may perhaps be reinforced if we imagine that E is one of a series of disconnected dreams in S, all of which are as coherent as E, but not as coherent as S. Note incidentally that we can hardly use vividness as a criterion of reality here. E need not seem as vivid when remembered in S as it does now, and our earthly dreams may well seem to be much more vivid when they are occurring than they do when we recall them afterwards.

So much for the first four criteria. Now how about the fifth, that the dream world would be hard to relate spatio-temporally to the real world? Ought we to assume that any world that cannot be so related to a real world cannot itself be real? Even if the answer were "Yes," this test could serve only to show that of the two worlds one was unreal; it could not tell us which one, unless we already knew. But let us first ask what might lead us to say that the two worlds were not spatio-temporally related. Let us assume that we are in E and considering D. Now the universe which contains E may be finite or infinite. It might be thought that if it is finite our task is easy. We have merely to examine it and see if it contains D. But the trouble is, how can we ever know that it *is* finite? I suppose our usual picture of a finite universe is of one in which light-rays travel all the way around it, so that in whatever direction we look through our telescopes we see the back of our own head (assuming we stay at the telescope long enough for the light-ray to complete its journey!) But light-rays can be bent by gravitation, and I suppose it is theoretically possible that the universe contained a duplicate of E, and the light-paths were such that they all led back, no matter where we pointed the telescope, to this duplicate of E. It seems then at any rate difficult to prove that the universe is finite. But if it is infinite we could certainly never prove that it did not contain D, because though D would no doubt have gravitational and other effects extending to infinity, all our measurements are subject to a threshold, and the effects of D might be below this. It seems difficult or impossible, then, to prove that D is not spatially related to E. I hope I have not trodden too heavily on the toes of the scientists in all this, but if I am wrong, and it is in fact possible to show that the universe is finite, this will not affect the truth of the rest of what I am trying to say.

Now how about temporal relatedness? Suppose that while in E we list the twenty periods ("days" and "nights") in order: D1, E1, D2, E2, D3, E3, D4 . . ., E10 (in which the list is made.) Then the E periods ("days") will form a coherent series in the right order (and by the right order I *mean* the order that makes them coherent. It is in order to put them in that order that we list them

in the way we do.) But now suppose that the D periods, taken in the order in which we have listed them (D1, D2, D3, . . .), do not form a coherent series. There is no reason why they should, because the D periods have not been listed in accordance with their positions in a coherent series, but in accordance with the ordering of the E periods in which each D period was first remembered (D1 was first remembered in E1, and so on; I am omitting complications about dreams being first remembered several days later, and am assuming each dream is remembered the day after it occurs.) But remember that D is an ideal dream world, and contains memories, or ostensible memories, of E. Suppose now that in D10 we made a list of the preceding periods from a D point of view. In this list the D periods would occur in order of coherence (say D3, D2, D6, . . . we will keep their E list names for convenience) and the E periods would occur in accordance with the ordering of the D periods in which they were first remembered. There is incidentally no reason why the writer of the E list (who is writing in E10, and will therefore remember the listing that took place in D10) should not agree that the D periods would have to be listed in the order in which the D list lists them if D is to be made coherent. Just as the D periods occurred in a jumbled order in the E list, so the E periods may occur in a jumbled order in the D list, and I cannot see that these jumbled orderings need bear any systematic relation to each other; we supposed that in the E list the second D period came after the third in order of coherence, but this does not seem to imply, for instance, that in the D list the second E period should come after the third in order of coherence.

Thus we should have two lists of periods, the E list and the D list, in each of which one set of alternate periods occurred in the order of coherence and the other in a jumbled order, and there would be, or need be, no "real" order outside these in terms of which they could be judged. Also, as we have seen, the jumbledness of the one list need not be the "reciprocal" of the jumbledness of the other. In these circumstances D and E would appear to be temporally non-related. Note, however, that we should probably have to accept some amount of fatalism (the doctrine that our choices do not influence the future) for D and E. For suppose

that in E*n* I remember D*n*, which itself contains memories of E*n* + 1 (remember that the E periods will be jumbled in the D list.) This will give me knowledge of E*n* + 1 while I am still in E*n*, and in order to avoid a contradiction (see Popper in *BJPS*, I) we shall have to assume that this knowledge has no effect on my actions when E*n* + 1 comes along. Alternatively we might perhaps suppose that interworld memory was imperfect to the extent that in E*n* I remember most of D*n*, but do not remember the memory of E*n* + 1 that D*n* contains. In E10 I might remember how that list read, but not remember why I made it, i.e., not remember the memory-evidence that made me make as I did. In this case the memory of E*n* + 1 in D*n* might have affected my actions in D*n*, and the question would arise whether my memories in E*n* could be allowed to include memories of these altered actions, provided I did not remember why I altered them. Whether the censored memories could in fact be adequately insulated I am not sure. One further qualification is necessary When we say that D*n* is first remembered in E*n* we shall have to mean that it is first directly remembered. It may previously have been remembered as part of the memory-content of some other period. We must assume that direct and indirect memories can in general be distinguished, e.g., by the indirect ones being fainter.

If D and E are temporally non-related one would suppose that they are spatially non-related too, and if D and E are not spatio-temporally related it is surely at least possible that the same applies to E and S, though since E has only one period and contains no memories of S the listing technique will not apply.

But need we assume that of two spatio-temporally non-related systems at least one must be unreal? I cannot see why we should, and such an assumption would seem to be quite arbitrary. It might well be, and would be in the system we have been considering, that any real world must have spatio-temporal relations and coordinates in some system, but I cannot see that this implies that all worlds must have them in the same system. Of course the transport problem from one world to another would be a mystery, but there are many mysteries in the world—what would Aristotle have said about TV?—and the general problem is independent of the

transport problem, if we allow that such sets of worlds could exist without inter-transport; their existence in this case could presumably not be verified. One result of all this is that even if we ever succeed in examining the whole of our universe we shall still not be able to conclude that we have examined all the spatio-temporal things that exist.

An objection might be raised along these lines: If we allow the reality of spatio-temporally non-related worlds, then if I refer to S, how can anyone discussing S with me know that he is himself referring to S and not to an identical double of S? I do not want to embark on a full discussion of the identity of indiscernibles here, but in the present context we could say that all identical worlds are to count as the same, without abolishing this single S, just as we might refuse to allow a real double of the earth to be different from the earth, without abolishing the earth itself—we might say on discovering this double that we had been right round the universe.

The upshot of all this is as follows: If we found ourselves in S with memories of E, S might be such that the first four criteria suggested that E was unreal; but the fifth criterion, which if we could successfully apply it might be thought conclusive, would in fact be difficult or impossible to apply, and would in any case be inconclusive—except of course in so far as it deprived us of one reason, spatio-temporal relatedness to S, for supposing E to be real.

III

At this point, however, the question may arise: What are we asking when we ask whether these worlds are real? Perhaps we ought to say that they are real if they satisfy certain criteria (coherence, etc.) and that this is all there is to be said? On this view to call something real just *is* to say that it satisfies these criteria; they are defining criteria rather than evidential criteria, and in so far as the choice of defining criteria is up to us we are not so much deciding, when applying them, *that* something is the case, as deciding *to* do something (treat a world as real) and the factual question evaporates.

In some cases this approach is obviously correct, as for instance when we ask what things are "really" material objects. Here it is obviously a question of what are, or are to be, the criteria for a material object, and these will be defining criteria—if something satisfies them, this means that it is *ipso facto* a material object, not that they provide good evidence for supposing it to be something or other. But in the present case this seems less satisfactory. To illustrate what I mean let us ask whether it would create any disvalue, on normal moral principles, to hit an inhabitant of such a world on the head for no good reason. I mention this question not in order to prove anything but simply to illustrate the nature of the original question about whether the world in question is real. The moral question depends for its answer simply on whether certain criteria such as coherence are satisfied—one wants to ask what, in this context, coherence is evidence for. To say this will no doubt put me in danger of an attack from verificationists who will think I am making an unholy mystery of the notion of reality, and also from milder critics who will ask me if I "know what it would be like" for the world in question to be real (or unreal). To these latter I suppose I should start by saying: "To say it was real would be to say that it was such that the hitting would cause disvalue." This contains the empty word "such." But then I might go on to argue like this: The only way I can know whether you are in pain is to observe your gestures, words, behavior, etc., but when I say you are in pain I do not *mean* anything about these. How can I know "what it would be like" for you to be in pain rather than shamming or hypnotized or a robot? I should say something like this: "If you are really in pain, then something like this pain I am now feeling exists." Similarly this is what I must say about the man in our new world; in this case the contrast is with being an illusion rather than with being a robot, but I do not think this makes any difference. Of course in any case we should have to call a halt sometime and decide to take something as real (or unreal); but what I am saying is that to take something as real is not the same as to make it real.

So far I have been considering the position where we are in S, and trying to pass judgments on E, which is present before us

(in memory)—or in E passing judgments on D. But what about where we are in E, as we are, and speculating about an S which is not present before us, even in memory? If we have no evidence whatever for the existence of S, or test we can now apply, does this mean that the statement that it exists, or that *a* world satisfying the relevant description exists, is meaningless? I do not think so. The assertion that S exists is meaningful if I can describe S, and I have described it. Whether we can apply any test now is irrelevant. Let us take another example: Suppose I say there is another plane of experience above thought, as thought is above sensation, or above consciousness, as consciousness is above brute matter; the meaningfulness of this depends on the justifiability of my using the phrase "plane of *experience*" (or whatever phrase I do use) as a generic term which gives meaning to the new concept by relating it, as co-species of a genus, to a familiar one. Again if I say some things do something higher than exist (as Plotinus appears to have said,) we must ask if this "something higher" is in a common genus with "exist." We have the genus "do something," but this is already weak when applied to "exist," and "higher" is unexplained. But if we keep to familiar terms like "thing" and "exist" I do not see why we cannot say there exist things which not only are, but always will be, beyond our experience altogether. The adventurousness of the possibilities allowed depends on how far we can stretch terms like "thing" while still keeping them near enough to their ordinary meaning to be meaningful. Perhaps other things could be said. But we cannot say them.

It may perhaps seem a barren victory to say: "There may be an S, not spatio-temporally related to the earth, for you cannot prove there is not!" If it is allowed that it is meaningful to suppose the existence of such an S, it is presumably equally meaningful to deny its existence. The assertor and the denier can neither of them prove their case, and can neither of them gain much comfort from each other's failure to do so, and for them to dispute the matter would indeed be barren, but I do not think it follows that the question whether the idea is meaningful is itself barren. "There may be an S; you cannot prove there is not!" is barren. But "There may be an S; you cannot prove the idea is meaningless!" is not barren.

For the third time we return to our question: How do we know we are not dreaming? Let us go back for a moment to an argument I dropped near the beginning. Does the sceptic here come up against the argument that the statement of his scepticism presupposes its falsity? Whatever may be the plight of the solipsist, I do not think the present sceptic need share it, because we are not supposing solipsism, but only that a given class of things (E) may be unreal. If it is asked how our language could have developed if E (and our language belongs to E) is unreal, we can answer that it could be parasitic on S, as the language we use in our actual dreams is parasitic on our waking language.

Why then am I not a sceptic in practice? Simply because there is not the slightest reason to be so! It is a good Ockhamite principle to assume I am not being deceived unless I have some reason to think I am. If we limit ourselves to E, then *perhaps* solipsism is meaningless, because we have derived our concept of "real" from the world we then turn round on and call unreal. (I italicize "perhaps" because I do not want to go into this question.) But once we admit the possibility of S then our concept of "real" may come from S, by a sort of Platonic *Anamnesis*.

Bedford College, University of London.

IDEAS AND IMAGES

CLIVE INGRAM PEARSON

THE IMPORTANCE of distinguishing in a clear and consistent way between ideas and images has not been far from the center of the modern philosophical consciousness since Descartes first brought it home to the modern world that philosophical speculation tends to stand or fall on just this issue. The precise factor which seems continually to call for clarification by means of distinguishing out mental furniture in addition to ideas, is the complex nature of the relation that is found to hold between ideas, as normally conceived, and objects. There would be no such complexity, and no consequent necessity to posit images in addition to ideas, if thinkers were able to follow out the natural inclination to mean by 'idea' simply an element of consciousness that corresponds in some way to, and is somehow enlightening about, some given object. In fact, however, it is taken as obvious that a great number of ideas are entertained to which there either just is not, or cannot, be any object corresponding. Of these ideas, that of Nothingness seems to be a clear example. This complexity, then, is taken to signify that the furniture of the mind ought to be divided into at least the two classes of entity signified by the terms 'idea' and 'image,' respectively. I want to suggest that, as necessary and adequate as this division might seem to be on the grounds suggested, it nevertheless incorporates in practice a radical error, the result of which is to protract endlessly and pointlessly the supposed analysis of 'idea' and 'images,' and at the same time to give rise to a great number of pseudo-problems clustered around the notion of correspondence. Images, I will suggest, are more properly to be classed with objects than with ideas, and failure to do so leads both to a covering up of the true and essential status of ideas, and to an arbitrary and unjustified limitation to the range of noetic objects.

The defining of 'image' as essentially that class of idea to which there is no object corresponding, springs from a commend-

able desire not to allow analysis to result in an incorrect conceptual multiplication of physical objects or situations. This result would be likely if the thinker succumbed to the temptation to consider that for every idea entertained there is somehow an objective physical situation corresponding. The simple calling of attention to the type of mental state signified by the word 'imagining' is reckoned to be sufficient to guard against this danger. And so it is. But at the same time, concentration upon this danger may easily lead to the consequent temptation to consider that there are some ideas (i.e., images) which have *no* objects of reference whatever. This is just not the case. The true insight that some ideas have no objective physical situations corresponding to them does not imply that some ideas have *no* objects of reference unless it be assumed that all situations or states of affairs are physical. But then if this is true there can be no specific meaning at all for the word 'idea' since by it we imply at the very least some distinction from the physical as such; and in this case *all* attempts to distinguish 'idea' as over against 'object' break down. The presence of this dilemma is enough to demand a re-analysis of the original distinction.

Although it is true that some ideas are related in no way to actual *physical* objective structures or situations, an unbiased phenomenological investigation will show, I suggest, that all ideas are in fact related, and closely related, to *some* actual objective structure or situation. That is, there is no idea whatever that is not an idea *of* or *about* something. To claim to have an idea of nothing is a roundabout way of entering the claim not to be thinking. Ideas of nothing are not ideas. The (erroneous) suggestion that they are is due entirely to the failure to keep in mind the complexities due to the possible elliptical use of language. That is, a person using the phrase 'idea of nothing' *may* for all we can know from that description be referring to the *word 'nothing,'* or to the *absence* of some intelligible whose presence was in fact expected, or to a structure or state of affairs regarded as being of *no importance*; but all of those possible objects of reference are far removed from the possibility of entertaining an idea of just sheer non-being. And any or all of these situations will do as well as any others to pro-

vide ideas with objects of reference, by distinction from which alone *they* are able to be distinguished as such. Ideas in fact reveal themselves as the means by which objects of reference are brought to the level of awareness; and *their* great diversity is due to nothing other than the great diversity which may therefore be seen to hold amongst these objects on situations. This diversity may be due to differences in physical structure, in formal structure, *or* to a difference in the mode of being itself. But, when possible confusions of the type described are eliminated, there is seen to be no case of ideas being present which is not also a case of *some* objective situation distinct from the idea being brought to light.

The original and fundamental danger involved in the usual distinction between ideas and images may now be exhibited more clearly. Whereas it is the intention behind that distinction to guard against the pointless and erroneous multiplication of physical objects or situations, and though this result is for the most part thereby achieved; at the same time the distinction achieves this result only at the expense of arbitrarily limiting the range of objects to the physical: and stands in danger of ignoring the further consequence deducible from the existence and analysis of ideas; namely, that the objective situation in fact extends beyond the realm of the physical. The important problem connected with ideas and images is to define them in such a way that the definitions incorporate both those aspects of the factual situation without detriment to, or confusion about, either. This can only be done where images are clearly and unambiguously classified with objects.

A further reason for the classification of images with ideas, (as a distinct variety of *idea*), is the obvious one that both ideas and images are in some intelligible sense mental, as distinct from physical, entities. And certainly this is true enough. But for all that, it is also obvious that the factor that distinguishes both ideas and images from the purely physical cannot also in the same sense function as the factor that distinguishes them from each other. The truth is that whereas both ideas and images are non-physical and alike in that sense, both images and physical entities or events are *objective* structures, and unlike ideas in precisely *that* sense. And it is in this latter sense in which images ought to be classified

with the physical. As far as I can see, it is the *only* sense in which they can be adequately distinguished from *ideas*.

It will be recalled that part of the preceding argument was to the effect that ideas, in the most general sense of the term, are to be defined as mental structures part of whose essential nature is always to have some object of reference or other by means of which they themselves are distinguishable as such i.e., as idea, and not *content of idea*, or *situation brought to light by idea*. A complexity arises in that ideas themselves seem to be able to play a role that might seem to refute the possibility of always distinguishing them in this way, and thus preclude the claim that such a distinction is also descriptive of their *essential* nature or status. Not only may ideas be the means for bringing a great variety of objects of reference to that status (i.e., the status of objects of *reference*), but they seem also to be able themselves to play the role of objects of reference. One may not only entertain thoughts about some object through the idea of that object, but one may entertain thoughts also about the idea of that object. How is the foregoing thesis to be maintained in view of the fact that there are not only ideas of objects, but also ideas of ideas?

Now it is precisely the proper clearing up of this difficulty I suggest, that both demonstrates the truth of the analysis of the status of idea suggested here, and at the same time clarifies the proper status of images. Ideas considered as the objects of reference of other ideas are being considered in a way that is in fact irrelevant to the elucidation of their status precisely as ideas. If, as we have said, it is not the essential nature of idea to *be* an object of reference but only to *have* an object of reference, then this implies that when one is using an idea one is not thinking about *it* but about its object. And this seems to be the case. By means of the idea of a table I think about table, not an idea; and even if it be said that the table is essentially a mental structure, *this* distinction remains valid. For the same reason it is also true that if I think about an idea, perform such an act of abstraction from the normal state of affairs as to bring the idea itself to the focus of attention, then I must do this by incorporating the same distinction. I must think about that idea by means of the idea of it; but

this idea thought about is just as much the object of reference of the means of its conception as the table is the object of reference of the means of its conception; and the idea of an idea is as distinct in status in comparison with its object as is the idea of a table in comparison with its object. Obviously, then, there ought to be another name for those ideas which, for many reasons, we choose to consider as it were out of character; namely, in abstraction from their natural and essential conceptual usage in which they invariably have objects of reference, and themselves go unnoticed. This is what we mean by the word 'image.' An image is primarily and basically an idea treated abstractly as an object of reference, and which, as thus treated, increases the range both of noetic objects and of the ideas through which those objects are known; which ideas are themselves in turn known only as having those objects as referents.

It is obvious that while the foregoing analysis implies one and only one definition of idea (namely, that ideas are invariably intentional entities, entities whose whole function is to make referents of all or any other entity or entities), it points to a distinction of type amongst images. On this analysis the term 'image' *can* refer either to a mental structure like the idea of a table which, though it *may* itself be used to refer to some physical object of reference is not in fact being used in this way; or it may refer to a mental structure like the image of a centaur which does not have the power to refer to a physical object of reference. But in both cases images function in exactly the same way; they answer to the definition of being purely mental constructions which when considered as objects of reference per medium of ideas, are validly able to increase the range of noetic *objects*, simply by themselves becoming those objects.

A potent and deep-seated confusion concerning the nature and function of images in knowledge grows out of the tendency to restrict the word 'image' to those mental structures which do not or might not have any physical object of reference—structures like images of centaurs, or images of fairies, or perhaps images of electrons and protons. This confusion is due to the temptation to call the (non-existent) objects of reference of those images,

imagined or fictive entities. Thus it is said that centaurs are imagined entities or that electrons might be only imagined entities. It takes only a little reflection to produce the conclusion that non-existents cannot be any sort of entity, and that in fact the only object under consideration in such cases as these is the image itself. This, however, is enough to show both that such images do play the role of objects of reference in knowledge, and that, even though they be purely mental structures like ideas, it is still a mistake to class them apart from physical objects and with ideas in this important respect; namely, in the precise respect that explains their status as *images*, their function in extending the range of noetic objects beyond the realm of the physical.

When images, then, are located exactly according to their proper status, they are seen to be like ideas (i.e., mental) only in a sense which is irrelevant to the elucidation either of their own essential nature or of the essential nature of ideas. On the other hand, when they are seen to be unlike ideas in every sense except that they are mental structures, they are seen in a way which pinpoints in one conception their own distinct and essential status as well as that of both ideas and objects as such.

From this suggested classification of images with objects, with the consequent elucidation of ideas as (the only) intentional or non-objective class of entity, several important clarifications follow. Not the least of these concerns the sense in which it is proper to claim that ideas are *universals*. If the preceding argument is sound, this means nothing other than that there is one and the same intentional characteristic involved in each and every act of awareness as a constitutive possibility of there being such acts. This characteristic is one and the same in a sense in which objects of reference are certainly not the same. On the contrary, it is precisely the fact that so many *different* objects of reference may all be brought to the same level (of awareness) that calls attention to a universal characteristic present in addition to them. Not all objects are actually and in detail objects of reference, or objects of awareness, but all may be; this potentiality is present with them, and in a vague way is always partially actualized; just this truth is acknowledged implicitly in the very statement that tries to

say the contrary, i.e., that some objects are unknown. It is known (in one sense) that such objects are unknown (in another sense) and to that extent all objects are objects of reference. Ideas in the sense of intentional entities, as the unique factor whose whole function is to light up everything else, are universally present. They exist where everything or anything else exists, and unlike everything else they exist in exactly the same way in every case, i.e., as intentions.

Because ideas are universals in this general sense they are universal also with respect to certain specified varieties of objects —to that range of objects which we call triangles for example. And it is in these specified cases that misconceptions concerning the meaning of universal—due to a confusion between ideas and images—seems to have arisen most frequently. Ideas function universally just as the constitutive possibility of one's being aware of any or all triangles; and that one is aware of triangles when this happens precludes, as we have said, the possibility of one's being aware at the same time of the idea itself as thus functioning. One can become aware of this universal function only by abstracting from the actual situation and making ideas themselves over into objects of awareness; but then the ideas become (abstracted) particulars, mental objects of reference, *images*, and are not then performing the universal function that makes them ideas. Thus it is pointless to inquire how, say, the idea of triangle as thus considered can be a universal. It is obvious that it is nothing but a particular (idea) which is made over into an object of reference. But the reason why such objects of reference cannot be easily seen to be universals is just that they have also ceased to be ideas; on the contrary, as thus spoken of they are *images*. And where the nature and function of abstraction is not consequently disregarded with respect to noetic conclusions, there is never in any case any evidence to undermine the contention that ideas *are* universals. Confusions about the respective status of universals and particulars reduce themselves to confusions about the proper status of ideas and images.

A further way in which the suggested distinction between ideas and images would seem to be relevant, concerns the analysis

of memory and imagination. Just as ideas are never in any case the objects of knowledge, but the unique and unusual mental factor explanatory of how all or any objects (including the especially difficult case of themselves) can come to that status, so also they are never in any case the objects of reference either in memory or in imagination; but, of course, there always are objects of reference on all those occasions and unless images are clearly classified in this category confusion tends to ensue. It has already been argued that the analysis of imagination stands in danger of confusing images, as mental objects of reference, with non-existents, by means of an ambiguous reference to 'imagined entities'; and a similar danger exists with respect to the analysis of memory. Here 'past events' tend to take the place of the non-existents, i.e., we tend to say that in memory we can be aware of past events. But an event that is past is no longer anything at all and of *it* one can have no awareness whatever, not even that remarkable sort of awareness which we call memory. No awareness is so remarkable as to be of or about a non-existent. Yet in memory, it is obvious we do have some object of reference before our mind, and the basic problem associated with the analysis of memory ought to be to say precisely what this object is. On our previous analysis it is clear that this object cannot be an idea. Nor, since past events are now non-existent, can it be a physical state of affairs. But if images are classified with objects in the sense suggested the alternative remains that the object of a memory is an image. Yet obviously it is not the same sort of image as one conceives in imagination; otherwise, since the 'idea' factor is a common one, imagination and memory would not be distinguishable. But it has already been said that images, unlike ideas, and like objects, may exhibit *various* characteristics. And memory is distinguishable from imagination, as from awareness of physical objects or events, precisely by means of the *type of image* that it takes as its object. That is to say, while imagination is of or about an image which itself has no physical object of reference, memory is of or about a (recreated, present) image which once did have an object of reference, but now has not. In memory we bring to mind *that* image; we refer to *it*. To claim to remember is to claim to be aware of

objects of reference (images) of a specifically designated sort. But unless images are classified in such a way as to be open to this role, all attempted analysis of memory will degenerate into highly speculative discussions about the supposed status of (now non-existent) past events.

Perhaps the principal importance of locating images amongst objects of reference, and apart from ideas, is to transcend the dilemma which has faced, and continues to face, rational analysis through the many resurrections of the Correspondence notion of Truth. In essence, of course, this theory pushes the apparently popular and fundamental notion that truth consists in the (proper) correspondence between our ideas and the reality that those ideas purport to represent. And as thus stated, the theory has always run against the criticism which asks how this correspondence itself is to be estimated. How can anyone perform this task unless he knows both the reality represented *and* the idea; and if he does know the reality, what point in knowing the idea? Out of this dilemma the tendency has been to push the Correspondence Theory into the background by the expedient of claiming to know or be concerned about only ideas themselves, with the result that philosophy comes to think of itself as doing some abstract and 'formal' task altogether unrelated to the mundane material which might happen to be present in the everyday world. But in spite of this (impossible, invalid) expedient the dilemma behind the notion of correspondence remains. It remains in the question of how it is that we can know our ideas directly in order to be able to discuss *them*. If we don't know directly, but only through the medium of ideas, then the problem behind the notion of correspondence has simply been transferred to another subject matter and left unanswered; on the other hand, if we do know our ideas directly, why can we not know their referents directly? And if we do know those referents directly, why did the notion that there are ideas ever arise in the first place?

The proper answer to these questions, I suggest, is implicit in the analysis of ideas and images suggested above. Where ideas are defined according to their proper, necessary, and unique status as intentional or non-objective entities, it becomes clear both that

ideas do function in knowledge and that for that very reason they are not themselves known. Instead they are the means whereby any object whatever is brought to the status of being known. This means that whatever the relation between ideas and objects it is certainly not one of correspondence; and for the reason that idea is the one factor discernible as such precisely as not being like any object whatever. After all, in what possible sense is an idea of a table *like* a table? It is not made of wood, nor is its formal structure table-like, i.e., extended in certain directions. On the contrary, the idea of a table is as much like a table as a mountain scene is like the window through which one sees it. If the window is clear enough one will not notice it at all; yet the fact will remain that one is seeing a mountain scene as seen through a transparency. Ideas are very much like this. One does not normally notice them at all; and yet if one takes the (abstract) trouble to look hard enough, one will see that they were in fact there all the time. But then one will have seen also that they are nothing like the scene, awareness of, which they nevertheless make possible.

The case is different, of course, with *images*. There is a sense in which images are very much like objects. To be sure, as with ideas, they can be like objects neither in their material nor (therefore) in their formal structure. But they are like objects just in the sense that, together with objects they may be thought about, or brought under the sovereignty of *idea*. But in this sense they function in knowledge not as part of its explanation, but as part of its constitution; namely, as its possible or actual object. Images cannot be arrived at as part of a theory of knowledge since the existence of knowledge already presupposes them together with all its other actual and possible referents. But ideas can and must be thus arrived at; knowledge about *them* is not either presupposed by, or necessary for, knowing. Knowledge about *them* comes only out of a highly abstract attempt at further noetic penetration; and it is the characteristic of this penetration that it results not, as is usually the case, in a further clarification of objects, but in a clarification of *knowledge* itself, i.e., that it is possible only because there exist non-objective entities which we call ideas. Thus the correspondence notion of truth is founded on a fundamental mis-

conception about the precise sense in which images can be like objects; to which it adds the even more pernicious misconception that in this sense images are also like ideas. And here, as in the many other avenues of philosophical speculation which I have tried to illustrate, thought will continually find itself face to face with the apparent mystery of absurdity and irrationality; unless, that is, attention is directed afresh toward the understanding of the ideas and images that bear the main burden of all noetic creative endeavor.

University of Auckland.

CHINESE GRAMMAR AND THE LINGUISTIC MOVEMENT IN PHILOSOPHY

TSU-LIN MEI

ARE PHILOSOPHICAL THESES relative to language? Carnap and Quine think they are; Ryle and Cohen think they are not.[1] In agreement with the former, I will try to show, by a description of some of the grammatical differences between English and Chinese, that certain philosophical theses are relative to language.

There are in fact two questions to be discussed. (1) Is the importance of a philosophical thesis relative to language? (2) Is the validity of a philosophical thesis relative to language? The answer to both questions is "yes." It can be shown that two well-known philosophical theses—the logical distinction between numerals and adjectives drawn by Frege, and the distinction between tasks and achievements drawn by Ryle—are true but trivial when stated in Chinese. This is the program for the first part of this paper. In the second part, I will try to show that Mrs. Daitz's statement "a sentence states, but its parts cannot state" and Strawson's grammatical criterion for the subject-predicate distinction are both invalidated by Chinese grammar.

The question "Are philosophical theses relative to language?" is ambiguous in another aspect. In a discussion of this kind it is important to distinguish object-language from meta-language. A philosophical thesis is expressed in its meta-language, and it is implicitly or explicitly about its object-language—that is, if this distinction applies. Thus the original question can mean either "Are philosophical theses relative to their meta-language?" or "Are philosophical theses relative to their object-language?" The

[1] Carnap, *Philosophy and Logical Syntax* (London, 1935), p. 78; Quine, *From a Logical Point of View* (Cambridge, Mass., 1953), p. 61, and *Word and Object* (Cambridge, Mass., 1960), p. 80; Ryle, "Ordinary Language," *The Philosophical Review*, LVII (April 1953), 167-186, esp. 171; L. J. Cohen, "Are Philosophical Theses Relative to Language?" *Analysis*, IX (April 1949), 72-77.

first question is that of translatability. It asks, "Can philosophical theses always be expressed in another language?" This is a question that I will *not* discuss. My present concern is rather with the second question: "Are philosophical theses relative to their object-language?" And my answer is, if the object-language is changed from English to Chinese or from German to Chinese, then certain philosophical theses—the four taken from Frege, Ryle, Mrs. Daitz and Strawson that I mentioned above—will either lose their importance or their validity.

Now, philosophers have argued that a philosophical thesis is not about any word or words in a particular language, or about the *usage* of any word or words in that language; it is about the *use* of a word or words. And a thesis of this kind, they claim, is language-neutral.[2] Cohen has stated the language-neutral position succintly thus: "Grammatical theses are relative to natural language; and, whenever one of them *mentions* an expression in that language to which it is relative, this expression at least forms an untranslatable element in the thesis. . . . when philosophical theses mention an expression there is nothing to prevent that expression's being translated along with the rest of the thesis."[3] It would then appear that a philosophical thesis is by definition not relative to its object-language. In other words, the distinction between untranslatable object-language and translatable meta-language is in principle not admissible with respect to philosophical theses.

Evidently this is a question concerning how the term "philosophical theses" should be used. If we adopt the definitions recommended by Cohen, our question then becomes, "Are there in current philosophical literature grammatical theses in disguise?" The answer is again "yes." But for the sake of exposition I wish to retain the object-language-meta-language distinction, which can be defended for the time being as follows. In books and periodicals that are classified by librarians and booksellers as being philosophical there often appear statements which talk about English or German words. Philosophical theses expressed by such statements would then have English or German as object-language. To illus-

---

[2] Ryle, *op. cit.*, 171.
[3] Cohen, *op. cit.*, 76.

trate. Frege said (in Professor J. L. Austin's English translation of *Foundations of Arithmetic*, pp. 39-40) "under the influence of the grammatical form, we are regarding 'one' as a word for a property and taking 'one city' in the same way as 'wise man.'" This philosophical thesis as originally stated by Frege in German, has German as its object-language, and as stated in the present English translation, has English as its object-language. It is in this sense that I will use the term "object-language of a philosophical thesis."

1. *Surface and Deep Grammar*

"All philosophy is 'Critique of language' . . . Russell's merit is to have shown that the apparent logical form of the proposition need not be its real form" (*Tractatus*, 4.003 and 4.0031). Generalize this statement and we have the program of the linguistic movement in philosophy: Philosophical mistakes are made by people who are misled by grammatical similarities or dissimilarities into overlooking logical dissimilarities or similarities. The analysts' function is to detect such philosophical mistakes—mistakes caused by systematically misleading expressions.

What happens if there are no misleading expressions? Is philosophy out of business then? Let us consider the situation in which systematically misleading expressions in English have, as their counterparts in Chinese, expressions that are systematically illuminating. I will be specific. Frege made the observation, that "under the influence of the grammatical form, we are regarding 'one' as a word for a property and taking 'one city' in the same as 'wise man.'" His point is that while numerals and adjectives are grammatically similar, what they stand for are logically dissimilar. But in Chinese, numerals and adjectives are grammatically dissimilar. Consequently their contrasting behavior, instead of obscuring their logical dissimilarity—as is the case in English and German—makes the dissimilarity all the more apparent. Under such circumstances, what need is there for philosophical analysis?

Another illustration of the same point is provided by the manner in which Chinese expresses the differences among tasks,

achievements, and dispositions—these are Ryle's distinctions in *The Concept of Mind*.[4] Briefly, tasks, achievements, and dispositions are expressed by Chinese verbs whose morphological structures are respectively of the form T, TA, and T*te*A—where T is a verb; A and *te* are suffixes. Thus it is possible to tell by the morphological structure of a Chinese verb alone, whether it stands for a task, an achievement, or a disposition. Now, Ryle is right in complaining against those who misconstrue the differences between tasks and achievements "as differences between co-ordinate species of activity or process, when in fact the differences are of quite another kind" (p. 149). But his philosophical thesis has importance only if the object-language is English. For the instances he gives to illustrate the contrast between tasks and achievements—"kicking and scoring, treating and healing, hunting and finding, clutching and holding fast, listening and hearing, looking and seeing, travelling and arriving" (p. 149)—are *in English* grammatically similar expressions. Once the object-language is changed from English to Chinese, the situation is radically different. For as noted before, Chinese task verbs and Chinese achievement verbs differ systematically in that the former (T) are simple words with one syllable and the latter (TA) are compound words with two syllables. (There are exceptions, but all the entries on Ryle's list conform to this pattern.) Thus it would require exceptional stupidity to make the kind of error that Ryle is anxious to correct—if the object-language is Chinese. Just as in the previous case of "one" and "wise," the logical dissimilarity can be seen through the grammatical dissimilarity.

From what has been said, the conclusion seems inevitable that when the object-language is changed from English to Chinese, or from German to Chinese, the value of the philosophical theses of Frege and Ryle undergoes drastic depreciation. To make my contention clear it would be helpful to separate their statements into two components—*what* they said, and the *importance* of what is said. They both claim that certain logical distinctions can be made. With Frege, it is between numbers and properties, and

---

[4] Ryle, *The Concept of Mind* (New York, 1949), Ch. V.

with Ryle, it is between tasks and achievements. They further assert that these logical distinctions are important, because the English or German words expressing these logically dissimilar concepts are grammatically similar, and hence systematically misleading. However, with Chinese as the object-language, the words expressing numbers and properties, and those expressing tasks and achievement, instead of being systematically misleading, are systematically illuminating. Therefore while the distinctions drawn by Frege and Ryle are still valid, there is no need to state them. In the immortal words of Adolf Meier, "where it doesn't itch, don't scratch."

There remains the task of presenting the grammatical facts.

(A) *Frege on Numerals and Adjectives*

Frege held that "If it were correct to take 'one man' in the same way as 'wise man,' we should expect to be able to use 'one' also as a grammatical predicate, and to be able to say 'Solon was one' just as much as 'Solon was wise.' It is true that 'Solon was one' can actually occur, but only in a special usage, and one not such as to make it intelligible when standing by itself. For example, it may mean 'Solon was a wise man,' if 'wise man' can be supplied from the context. In isolation however, it seems that 'one' cannot be a predicate."[5] A footnote is attached to the last statement: "Usages do occur which appear to contradict this; but if we look more closely we shall find that some general term has to be supplied, or else that 'one' is not being used as a number word—that what is intended to be asserted is the character (not of being single, but) of being unitary."[6]

I believe the following is what Frege meant to assert. Numerals and adjectives are grammatically similar but the concepts they stand for are logically dissimilar. The grammatical similarity between the two consists in the following items. (E1) Both numerals and adjectives can immediately precede the noun they modify, e.g., "three books," "red book." (E2) In predicates they

[5] Frege, *Foundations of Arithmetic*, trans. J. L. Austin (Oxford, 1950), pp. 39-40.

[6] *Ibid.*

can occupy the last position, e.g., "God is three" "God is wise." To be sure, both Frege and Geach[7] have pointed out that in a sentence like "God is three," "three" is not a grammatical predicate and does not express a divine attribute. But "is three" does *look* like "is wise," and that is sufficient to mislead philosophers into thinking that they are logically similar. (E3) Both numerals and adjectives are what linguists would call *free forms*,[8] that is, they can be uttered alone; linguistic forms that cannot be uttered alone are *bound forms*,[9] e.g., "a," "an," "the," and suffixes like "-ing," "-ed," and "-s." "Three" and "red" are free because to answer the question "How many books do you have?" we say, "Three"; and to answer the question "What color is your book?" we can say "Red."

As we shall presently see, all these three privileges of occurrence are enjoyed by Chinese adjectives but denied to Chinese numerals. Hence the misleading grammatical similarity does not exist with respect to Chinese.

We must now proceed to a presentation of Chinese grammar, but as a preliminary, I would like to describe the procedure of presentation and explain why such a procedure is adopted. When the importance or validity of a philosophical thesis is contested by the introduction of counter-examples drawn from an "esoteric" language, the reader is likely to suspect—and rightly so—that the informant, the grammarian, and the philosopher (all in one person) had entered into collusion to make the contention plausible. To obviate this well-justified scepticism, I will always let other grammarians of Chinese make the initial presentation, thus limiting my own share to that of explaining and paraphrasing what others have said. In addition I will always refer the reader to at least two standard texts giving the same description as the one presented. With this prefatory note, I now turn to the grammar of Chinese numerals and adjectives.

---

[7] Geach, "Subject and Predicate," *Mind*, VIX (1950), 466.

[8] See Robert A. Hall, *Linguistics and Your Language* (New York, 1960), pp. 98-99 and Bloomfield, *Language* (New York, 1933), pp. 177 ff. for definitions of free and bound forms.

[9] *Ibid.*

One heuristic way of understanding the grammar of Chinese numerals is to regard all Chinese nouns as mass nouns. In English, a "measure" must be used between a mass noun like "water" and a numeral, e.g., "two glasses of water," "two pools of water," but not "two waters." Otherwise nothing intervenes between the numeral and the (non-mass) noun, e.g., "two rivers," "two lakes."[10] This pattern for English mass nouns (numerals-measure-noun) is obligatory for all Chinese phrases containing a numeral and a noun. Pages 16-17 of *Speak Chinese*[11] makes this clear:

1. A NOUN (N) is a word which may be preceded by a measure. . . . All Chinese nouns stand for generalized concepts such as paper, grain or tea. In English one says: Paper is made of wood pulp; Tea is imported from China, etc.

2. NUMBERED NOUNS: Since Chinese nouns are usually not inflected for number or quantity, when it is desired to indicate these aspects, a noun is always preceded by both a number and a measure, as in the following:

   Wo yu san-ko [three pieces of] *piao*.
   I have three watches.

   T'a yao mai liang-pen [two volumes of] *shu*.
   He wants to buy a couple of books.

3. A MEASURE (M) is a word which may be preceded by a number, or a specifier, or both, and is followed by a noun, in fact or understood. English expressions with a similar

[10] Quine in *Word and Object*, pp. 91-92 pointed out that a mass noun "water" can have a special use that admits the plural—one mark of a mass noun is that it admits no plural. Conversely, a non-mass noun like "apple" is also commonly made to double as a mass noun; in "put some apple in the salad," "apple" does not mean "some apple or other." Still, when a noun is used as a mass noun in English, a measure must come between it and a numeral.

[11] M. Gardner Tewksbury, *Speak Chinese* (New Haven, 1948). A similar description can be found in Y. R. Chao, *Mandarin Primer* (Cambridge, Mass., 1948), pp. 45-46. For the sake of uniformity, all my examples in this paper will be drawn from spoken Mandarin—the official speech of China and my mother tongue—and all citations, irrespective of their source, will be in the Wade-Giles system.

function are: a flock of sheep, this pair of shoes, three pieces of pie, etc.

Notice especially what the second paragraph says. "A noun is always preceded," not just by a number, but "by both a number and measure" in any phrase containing both a number and a noun. And this distinguishes Chinese numerals from Chinese adjectives; it also distinguishes Chinese numerals from English numerals and English adjectives. Chinese adjectives can immediately precede a noun, e.g., *hung shu*, 'red book.' So also can English adjectives and numerals, e.g., "three books" "red book"; but Chinese numerals cannot. For the same reason—that is, a numeral must be followed by a measure—a Chinese numeral cannot occupy the last position of a predicate; an adjective can, e.g., *Shu hung* 'The book is red.'

Chinese numerals and Chinese adjectives also differ grammatically with respect to the free-bound distinction. Professor L. S. Yang writes, "The numerals from one to ten are all marked bound in the *Concise Dictionary*. The reason is that when the number refers to anything specified, it will occur at least with an auxiliary noun. To answer the question *Ni yu chi-pen shu* 'How many books have you?' the free-word answer 'three' in English will be expressed in Chinese by *san-pen* ['three volumes'] but not by *san* ['three'] alone."[12] In contrast, adjectives are free, as witnessed by these two statements. "Adjectives in Chinese are very much like verbs . . . The above discussion of verbs also applies to them."[13] And in the previous paragraph, Yang writes,

---

[12] L. S. Yang, "The Concept of 'Free' and 'Bound' in Spoken Chinese," *Harvard Journal of Asiatic Studies*, XII (December 1959), 465. The *Concise Dictionary* referred to is *Concise Dictionary of Spoken Chinese* (Cambridge, Mass., 1947) by Y. R. Chao and L. S. Yang, and "auxiliary noun" is synonymous with "measure." Yang went on to discuss the exceptional cases in which a numeral is free, such as in counting, in throwing dice and so on. It should be remarked that as long as Chinese numerals and adjectives exhibit contrasting behavior most of the time, there is little danger of their being regarded as belonging to the same grammatical category, and that is sufficient for our purpose. Cf. *Mandarin Primer*, p. 22, the section on "Auxiliary Nouns."

[13] Yang, *op. cit.*, 467. Strictly speaking, it is not adjectives that are free, but words that have both a verbal and an adjectival use that are free.

"Most one-character verbs are free. . . . Verbs composed of two or more characters are usually free . . ."[14] In other words, adjectives, like verbs, are free; numerals are bound.

I now summarize what has been said about Chinese grammar. (C1) An adjective can immediately precede the noun it modifies; a numeral cannot. (C2) An adjective can occupy the last position of a predicate; a numeral cannot. (C3) An adjective can be uttered alone; a numeral cannot.

It is now apparent that the grammar of Chinese adjectives and the grammar of Chinese numerals are systematically dissimilar. Moreover, it is in the very respects which make adjectives and numerals similar in English that their Chinese counterparts exhibit unmistakable dissimilarity.

Since the misleading similarities that Frege is anxious to point out do not exist in Chinese, his philosophical thesis, though still valid, is no longer important.[15] The matter can also be put somewhat differently. Frege, with German as his object-language, was making an important point when he remarked that numerals and adjectives are logically dissimilar—the deep grammar is hidden by the surface grammar. But if a Chinese philosopher were to make the same distinction, he would only be retailing the funded logical wisdom of his people—the deep grammar is already exhibited in the surface grammar.

Notice that while (E1), (E2), and (E3) have English as their primary object-language, they are equally true of German. Thus (G1) both numerals and adjectives can immediately precede the noun they modify, e.g., "drei Bücher," "rotes Buch." (G2) In attributive predicates they can both occupy the last position, e.g.,

---

Thus, in answering the question *Wo lien hung puhung?* 'Is my face red?' we can say *Hung.* '(It is) red.' Here, the free-form *Hung* is a verb, or what is sometimes called a "stative verb" (*Speak Chinese*, p. 3), since it comments on the implicit topic *ni lien* 'your face.' But as *hung* 'red, is red' can also be used as an adjective, e.g., in *hung shu* 'red book,' we can say—perhaps elliptically—that the adjective *hung* has a free use in the previous example.

[14] *Ibid.*

[15] I note in passing that Geach's remark that "[in 'God is three'] the numeral 'three' does not express a divine attribute, like the adjective 'wise'" (*Mind* LIX (1950), 466) is similarly pre-empted by Chinese grammar.

"Gott ist drei," [16] "Gott is weise." (G3) Both numerals and adjectives can occur as free forms, e.g., "Drei," "Rot." That is why Frege's philosophical thesis when translated into English does not lose its importance, but when translated into Chinese it does. That is also why the linguistic movement in philosophy counts among its leaders both German-speaking philosophers like Frege, Carnap, and Wittgenstein, and English-speaking philosophers like Russell, Wisdom, and Ryle; the linguistic affinity between the two West Germanic languages greatly facilitates the transfer of analytical doctrines across the linguistic boundary. On the other hand, there can be little doubt that a transplanted linguistic movement in philosophy from farther out—farther out geo-linguistically—would deal with issues which show hardly any resemblance to those dealt with by the Anglo-German school. One next example will reinforce the above conclusion.

(B) *Ryle on Task, Achievement, and Disposition*

Let us begin by reviewing the now familiar thesis of *The Concept of Mind*. The fundamental distinction is between occurrence words and disposition words.

To describe glass as brittle, or sugar as soluble, is to use dispositional concepts. "The brittleness of glass does not consist in the fact that it is at a given moment actually being shivered." And "to say that sugar is soluble is to say that it would dissolve, or would have dissolved, if immersed in water" (p. 43). In general, to say that something has the capacity to do X, or is liable to do X, is not to say that something is actually doing X. The former is a disposition; the latter is an occurrence.

Within the general category of occurrence words, Ryle draws attention to two subtypes which he calls "task words" and "achievement words." As instances Ryle offers the pairs "kicking and scoring, treating and healing, hunting and finding, clutching and holding fast, listening and hearing, looking and seeing, travelling and arriving" (p. 149). (I will refer to the pairs above as "Ryle's

[16] This expression is odd, but then, so is its counterpart in English, "God is three."

List.") He complains that the differences between these pairs "have been misconstrued, if they have been noticed at all, as differences between co-ordinate species of activity or process, when in fact the differences are of quite another kind" (p. 149). The right explanation according to Ryle is that there are, in each pair, not two activities but one activity with a certain upshot or culmination. Each pair contains a task verb and an appropriate culmination verb.

Following the procedure of presentation of Chinese grammar that has been announced, I now quote *Speak Chinese* again.[17] The purpose of this quotation is to show that in Chinese, tasks, achievements, and dispositions are expressed by verbs whose morphological structures are respectively of the forms T, TA and T*te*A:

RESULTATIVE COMPOUND VERBS: Resultative verbs are compounds of two members, in which the first or root verb indicates the kind of action involved, while the second shows the result or extent of the action expressed by the first.

There are two types of resultative compounds: (a) ACTUAL, in which the result or goal has been actually attained, and (b) POTENTIAL, in which the result or extent of the action is conceived of as being possible or impossible of attainment. The potential type is formed by inserting between the first and second member *-te-* for the positive, and *-pu-* for the negative:

(a) Actual Type:

Ni k'anchien t'a le pa?	You saw him, I presume?
K'anchien t'a le.	Yes, I did.
Nimen ch'ihwanle meiyu?	Have you finished eating?
Hai meich'ihwan ne.	Not yet.

(b) Potential Type:

Neige ch'uan K'antechien ma?	Is that boat visible?
K'antechien.	Yes, it is.
Nimen ch'ihtewan ma?	Can you finish up (the food)?
Ch'ihpuwan.	No, we can't.

I now give a paraphrase of what has been said. There are

[17] *Speak Chinese*, pp. 136-137. I have changed the examples in (b) so as to avoid introducing new vocabulary. Cf. *Mandarin Primer*, p. 41 and p. 145, the paragraphs on "suffix for possibility" and "potential complement."

three types of resultative compounds in Chinese: (a) the actual type with the form TA, (b′) the positive potential type with the form T*te*A, and (b″) the negative potential type with the form T*pu*A. All three types are compounds of two members, consisting of T—the root verb indicating the kind of task involved—and a suffix. The suffix for (a), the actual type, is a resultative verb ending, A, which indicates the achievement or completion of the task indicated by T. In the example given above, *k'anchien* 'see' and *ch'ihwan* 'finish eating' are both of the type TA. *K'an* means "look"; *ch'ih* means "eat"; these are task verbs. *Chien* is a resultative verb ending which "indicates perception of what is seen, heard, smelled, etc." [18] *Wan* is also a resultative verb ending which "indicates end or completion of action." [19] Thus the compound *k'anchien* 'see' has a root verb *k'an* 'look' which indicates the kind of task involved, and a suffix *chien* which indicates that "over and above" the performance of "the subservient task activity" (phraseology Ryle's), a successful culmination has been achieved. The same kind of analysis applies to *ch'ihwan* 'finish eating.' *Ch'ih* 'eat' indicates the task, and *wan* indicates the completion of action.

The suffix for (b′), the positive potential type, is *-te*A, which indicates the possibility of achieving the task indicated by T. To say *ch'uan k'antechien* 'the boat is visible' is to say that it could be seen, or could have been seen if someone with good eyesight looked in the right direction. To predicate *ch'ihtewan* 'can be finished up' of the food, is to say that someone has the capacity, i.e., an appetite voracious enough, to finish it. Since expressions of this form fulfill Ryle's criterion for dispositional concepts, resultative compounds of the positive potential type (T*te*A) are dispositional verbs. The suffix for (b″), the negative potential type, is *-pu*A, which indicates the impossibility of achieving the task indicated by T. Thus *ch'ihpuwan* means "cannot be finished up" and *k'anpuchien* means "cannot be seen." Negative potential verbs are also dispositional verbs.

It is now apparent that Chinese verbs of the types T, TA, T*te*A

---

[18] *Speak Chinese*, p. 132.
[19] *Ibid.*

are respectively task verbs, achievement verbs, and dispositional verbs.

Speak Chinese goes on to remark that "the test for resultatives is whether the compound can be converted into the potential type or not" (p. 137). Taking this remark as a clue, we can formulate a strictly formal method of classifying Chinese verbs into task verbs, achievement verbs and dispositional verbs. Given a compound XY, test to see whether the compound can be converted into the potential type or not, that is, whether X*te*Y makes any sense. If it doesn't, then XY is not a resultative compound. It is does, then XY is an achievement verb with a structure TA; X is a task verb, and X*te*Y is a dispositional verb.[20] Consequently, in separating words into the three Rylian categories, one is either doing informal logic where the object-language is English, or formal grammar where the object-language is Chinese.

I now exhibit in parallel columns the English and Chinese versions of Ryle's List.

Ryle's List

In English		In Chinese	
kick	score	*t'i*	*t'ichung*
treat	heal	*yi*	*yihao*
hunt	find	*chao*	*chaochao*
clutch	hold fast	*chua*	*chuachu*
listen	hear	*t'ing*	*t'ingchien*
look	see	*k'an*	*k'anchien*
travel	arrive	*tsou*	*tsoutao*

One can immediately see that the two columns in English look alike whereas the two columns in Chinese look different with respect to their visual simplicity or complexity. Specifically the difference consists in the fact the Chinese task verb is repeated in the achievement verb whereas the English task verb is not. This phenomenon

[20] Every language has its idiosyncrasies, and this criterion, like any other criterion, is not applicable to all Chinese verbs. Thus some resultative compounds have only the actual type but no potential type, e.g., *chengming* 'to prove,' *kailiang* 'to improve'; some have only the potential type but no actual type, e.g., *tuipuchu* 'excuse me,' *laitechi* 'soon enough,' *k'antech'i* 'have respect for.' I am indebted to Professor Y. R. Chao for this, and other valuable observations. However every item on Ryle's List is well-behaved.

strongly suggests Ryle's thesis that "there are, in each pair, not two activities, but one activity with a certain upshot or culmination."[21] Seen in this light, his explanation of the difference between task and achievement seems to be worded especially to fit Chinese grammar. He says, "in applying an achievement verb we are asserting that some state of affairs obtains over and above that which consists in the performance, it any, of the subservient task activity" (p. 150). This is exactly what we do when we employ a Chinese achievement verb; we use T to assert the performance of the task activity and A to assert that some state of affairs obtains over and above the performance of the task activity —the achievement suffix A is precisely what the achievement verb TA has over and above its subordinate task verb T.

A glance at the above table also makes it easy to understand Ryle's complaint against those philosophers who misconstrue the difference between task words and achievement words. The reason why English-speaking philosophers are liable to regard tasks and achievements as "co-ordinate species of activity or process" (p. 149) is that "kick and score, treat and heal, hunt and find, clutch and hold fast, listen and hear, look and see, travel and arrive" all have the same number of morphemes,[22] (except "clutch and hold fast" which is more like Chinese)—namely, one. Thus while an achievement verb is required to do two logical jobs, it is only given one morpheme to work with—hence the misleading parallelism. But when the object-language is changed from English to Chinese, the parallelism ceases. A Chinese task word usually has one syllable, is written with one character, and consists of one morpheme. A Chinese achievement word usually has two syllables, is written with two characters, and consists of two morphemes—a task word and a separable resultative suffix. No confusion, hence no need for clarification.

---

[21] Ryle did not say this; the quotation is taken from F. N. Sibley's fine summary of Ryle's thesis in "Seeking, Scrutinizing and Seeing," *Mind* LXIV (1955), 455.

[22] A linguistic expression which bears no partial resemblance in form and in meaning to any other expression is a morpheme. See Bloomfield, *Language*, p. 161, or Robert A. Hall, *Linguistics and Your Language*, p. 105 for further discussion of this fundamental linguistic notion.

II. *Regional and Global Grammar*

So far I have tried to show that a philosophical thesis loses its importance when it is stated with respect to a language whose grammar conspicuously conforms to it. This is the vice of over-cooperation which makes the thesis commonplace and platitudinous. On the other hand, there is the vice of under-cooperation. That is, the grammar of the object-language may fail to exhibit those features singled out for emphasis by the philosophical thesis. I wish to call attention to two extreme cases of this phenomenon —extreme, because the philosophical theses concerned are altogether invalidated.

(C) *Mrs. Daitz on Pictures and Sentences*

In "The Picture Theory of Meaning"[23] Mrs. Daitz made the statement that "a sentence states, but its elements cannot state" (p. 62). She evidently meant to claim universal validity for her thesis—that is, she considers her description to be true of all sentences in all languages. This claim I wish to contest.

The context of her statement needs to be made clear. She was trying to show that "a sentence and a picture differ in the very respects in which—if the one is to be a model for the other—they would have to resemble one another" (p. 67), and consequently according to Mrs. Daitz the picture theory of meaning is mistaken. The over-all difference between the two is that a sentence and its elements are specialists with different skills whereas a picture and its elements operate under a more primitive—that is, undifferentiated—economy. Specifically, according to Mrs. Daitz, a sentence has the following three characteristics not possessed by a picture. (D1) A sentence states; it cannot refer or describe. (D2) Parts of a sentence refer or describe; they cannot state. (D3) A sentence does not have parts which are little sentences.

---

[23] E. Daitz, "The Picture Theory of Meaning," *Mind* LXII (1953), 184-201; also included in *Essays in Conceptual Analysis*, ed. A. Flew, pp. 53-77. All subsequent references in the text by page number alone is to the latter. I must confess that in discussing Mrs. Daitz's thesis, I feel handicapped by the lack of definiteness in her statements. Naturally I have tried to deal with her position according to the best understanding I have of it.

In contrast, not only do all the elements of a picture signify in the same way, but the picture signifies the way all its elements do. A picture consequently, does have parts which are little pictures.[24]

To illustrate her point, she asks us to "compare the sentence 'My cat sits on his cushion' with a picture of a cat on a cushion." She points out that "if from the drawing I erase the cushion I leave a picture of a cat. The removal of 'sits on his cushion' from the sentence leaves, not a sentence, but a phrase" (p. 62). Thus "My cat sits on his cushion" has two parts, "My cat" which predominantly performs the referring function, and "sits on his cushion" which predominantly performs the describing function. Neither of these parts used in isolation can state. Nor can the sentence as a whole describe or refer. On the other hand, the picture of a cat, which is a part of the picture of a cat on a cushion, shows the same way the containing picture does.

Now, it is not clear how the term "parts of a sentence" (or its synonym "elements of a sentence") is to be understood. In analyzing a sentence into its parts, is Mrs. Daitz using a grammatical criterion or a logical criterion? This question is important. For if her criterion turns out to be a logical one, then the same result should be obtained no matter in what language a proposition is expressed. In that case, it would be irrelevant to introduce the facts of Chinese grammar. Hence our immediate task is to show that Mrs. Daitz's criterion is a *grammatical* one.

I will not discuss how a logical analysis differs from a grammatical analysis in general. For our purpose, it is sufficient to indicate how with respect to the sentence "My cat sits on his cushion" the two criteria yield different results. The grammatical analysis of a sentence into subject and predicate follows this rule: the expression to which the main verb must agree in number and in person is the grammatical subject; the remainder is the grammatical predicate. On the other hand, if a sentence is about a term introduced by the expression X, then X is a logical subject of that sentence. (To avoid circumlocution in the subsequent discussion, I will not always distinguish between an expression and

---

[24] Mrs. Daitz original statements, which I have paraphrased, can be found in *Essays in Conceptual Analysis*, p. 62 and p. 70.

what an expression stands for.) The important difference between the two criteria is that while a sentence has a unique grammatical subject, it can have several logical subjects. For example, "My cat sits on his cushion" is also about the cushion. Consequently both "my cat" and "his cushion" are logical subjects of this sentence. But only "My cat" is the grammatical subject; it is the expression to which "sits" must agree in number and in person.

The two criteria also differ with respect to the uniqueness of the resulting division. If the grammatical criterion is used, then there is only one way to divide a sentence into its parts. "My cat sits on his cushion" can only be divided into "My cat," its unique grammatical subject, and "sits on his cushion," its unique grammatical predicate. But if the logical criterion is used, then in addition to the above analysis the sentence can also be divided into "My cat sits" and "on his cushion." "His cushion" as the logical subject performs the referring function, and "My cat sits" as the logical predicate performs the describing function; the latter describes the former as being the thing on which my cat sits.

In her paper Mrs. Daitz uses the expression "elements which refer or describe" (p. 62), and it is not immediately clear whether it should be construed as "the grammatical subject or predicate" or "the logical subject(s) or predicate." But upon closer examination the former is to be assumed. First of all, she clearly follows the contour of grammar in analyzing her two examples. "The tree is bare" is divided into "The tree" and "is bare," and "My cat sits on his cushion" is divided into "My cat" and "sits on his cushion." Secondly, and this is important, in discussing "My cat sits on his cushion"—which is the only illustration she gives for her statement "a sentence states, but its elements cannot state"—she failed to consider the possibility of dividing the sentence into "My cat sits" and "on his cushion." This omission, I want to show, is not merely an oversight; it is essential to her thesis. For if this logical division is allowed, then the sentence "My cat sits on his cushion" would then have as one of its parts, "My cat sits." This part, used alone, states the fact that my cat sits.[28] Moreover, if from the

[28] I have benefited from Geach's fine discussion of a similar example "Peter struck Malchus" in his "Subject and Predicate."

drawing I erase the cushion, I still leave a picture of a cat in sitting posture. The removal of "on his cushion" from the sentence leaves, not a phrase, but a sentence—that is, "My cat sits." As the sentential remainder states exactly what the pictorial remainder shows, Mrs. Daitz's thesis, would not even be true of English.

It may be objected that in taking off a referring part—that is, a logical subject—we should only remove "his cushion." The remainder should therefore be "My cat sits on," which is not a sentence. Clearly, this type of objection can be made only with respect to sentences with intransitive verbs, and for this reason, easily answered. In the first place, whether a verb is transitive or not varies from language to language. The Chinese verb *tsuo* 'to sit,' it happens, has both a transitive and an intransitive use. Thus one way of obviating the problem raised by the dangling preposition is to translate "My cat sits on his cushion" into Chinese. In the second place, we can, without resorting to translation, choose for our example a sentence like "John married Mary." The removal of "Mary," one of its logical subjects, leaves the remainder "John married," which states the fact that John is no longer a bachelor. (It should be noted that the division of "John married Mary" into "John married" and "Mary," like the division of "My cat sits on his cushion" into "My cat sits" and "on his cushion," is sanctioned by the logical criterion but not by the grammatical criterion.)

The upshot of the foregoing discussion is this. In analyzing sentences, we can either employ the grammatical criterion or the logical criterion. If the former is chosen, "My cat sits" would then have to be considered as a part of the sentence "My cat sits on his cushion"—with the consequence that Mrs. Daitz's statement "a sentence states, but its elements cannot state" is not valid for both English and Chinese. We can say in that case that her philosophical thesis is relative to language in the sense that its validity depends upon which part of a language is used as its object-language. With respect to relational sentences like "John married Mary" or "My cat sits on his cushion" her thesis is not valid; with respect to non-relational sentences like "The tree is bare" it is. On the other hand, if the logical criterion is employed, then her thesis

is without exception valid for all sentences expressed in English. But her thesis is still relative to language. For as we will presently see, there are sentences in Chinese which have parts—where "parts" is defined by the grammatical criterion—that can state.

The last statement is not quite exact. We do not want to assert that the application of the grammatical criterion to Chinese will yield parts that can state. Rather it is the application of a generalized grammatical criterion which will yield conclusions directly contradictory to Mrs. Daitz's thesis. The reason in this. The grammatical criterion which defines the grammatical subject as the expression to which the main verb must agree in number and in person is not applicable to a morphologically different language like Chinese, whose verbs are not inflected for number or for person. Hence before English and Chinese can be profitably compared, we must first formulate a grammatical criterion for the subject-predicate distinction that is applicable to both.

The generalized criterion is based on linguistic facts of the following kind. Between the grammatical subject and the grammatical predicate, we can interject a remark or simply pause. For example, "The tree, I regret, is bare"; "My cat, as usual, sits on his cushion." As noted by Professor Y. R. Chao, the same phenomenon is present in Chinese. "In a full sentence, the subject and the predicate are separated or separable by a pause, or a particle of pause *a*, *ne*, or *me*, between them. For example, *Ni tai shou* 'You are too thin,' or *Ni a, tai shou* '(As for) you, (you) are too thin.'"[26] The two parts separated by the particle of pause *a* are respectively *Ni*, 'you,' the subject, and *tai shou* 'are too thin,' the predicate.

A new criterion calls for a new terminology. Since the two fragments separated by the pause are quite evidently related as topic and comment, we will, in agreement with the convention of linguists, call the generalized subject and predicate "topic" and "comment."[27] The new criterion can now be stated: In a full

---

[26] *Mandarin Primer*, p. 34.

[27] For further discussion on topic and comment see Chao, *op. cit.*, p. 35 and "Notes on Chinese Grammar and Logic," *Philosophy East and West*, V (April 1955), 31-41, esp. 38-39; and also Charles Hockett, *A Course in Modern Linguistics* (New York, 1958), pp. 201-203.

sentence, the two parts separated or separable by a pause or an interjection are respectively the topic and the comment; the prior element is the topic and the posterior element is the comment. This criterion obviously generalizes the grammatical criterion for English, and, as we have indicated, is applicable to Chinese.

My task now is to show that with this criterion, Mrs. Daitz's thesis is invalidated by Chinese grammar. Let us review briefly the main contentions of this thesis. (D1) A sentence states; it cannot be a part of another sentence—the part that describes or refers. (D2) Parts of a sentence refer or describe; they cannot state. (D3) A sentence does not have parts which are little sentences. These statements can now be clarified further. What Mrs. Daitz probably intended to assert is that a sentence and its parts are different in construction. A sentence is constructed in accordance with a bipartite plan; it is the joint use of the topic and the comment that enables a sentence to state. In contrast, parts of a sentence do not show the same bipartite plan; that is why they cannot state. And to say that a sentence does not have parts which are little sentences is to say that none of the parts of a sentence has the same construction as the sentence itself.

Compare Mrs. Daitz's thesis with the following description of Chinese grammar given by Chao: "It should be remarked in passing that a very common type of multiple subjects (to which the preceding example belongs) is in the form of a 'Chinese puzzle, in which S-P is used as P' to S', S'-P' in turn is used as P'' to S'', and so on."[28] (S and P stand for topic and comment, as defined previously). Now, P'' is an element of the sentence S''-P''. Since it is also S'-P', it can state. Thus we have a sentence a part of which can state. Moreover, sentences S-P and S'-P' perform the describing function under the aliases P' and P''. This is also contrary to her thesis. Finally, the sentence S''-P'' has parts which are little sentences, viz., S'-P' and S-P. But these characterizations according to Mrs. Daitz, should be reserved for pictures only.

The "preceding example" referred to by Chao is *Chiench'iao payüeh erhshihsanjih Kuochi Tungfanghsüehche Huiyi hsüantu*

[28] "Notes on Chinese Grammar and Logic," 39.

lunwen 'Cambridge August twenty-third International Orientalists Congress read papers.' However, for two reasons I will not discuss this example. It will be recalled that our standard procedure requires that the initial presentation of data be made by a grammarian whose philosophical neutrality is above suspicion. Chao happens to be both a linguist and a philosopher. Secondly, the description he gives of the above example, while lucid and complete as usual, is not quite self-explanatory. But our examination of Mrs. Daitz's thesis is by no means hampered by the lack of concrete illustration. Professor Hockett in *A Course in Modern Linguistics*—which, unlike the suspicious looking *Philosophy East and West*, does not deal with philosophy—has analyzed in detail a sentence whose grammatical structure is isomorphic to Chao's example. Therefore I will offer Hockett instead.

Hockett states, "Furthermore, many Chinese comments consist in turn of a topic and comment, so that one can have a sentence built up of predications within predications, Chinese-box style. *Wo chint'ien ch'engli yu shih*, freely, 'I have business in town today' has topic *wo* 'I' and the remainder as comment. *Chint'ien ch'engli yu shih* 'There is business in town today' in turn has topic *chint'ien* 'today' and the remainder as comment. *Ch'engli yu shih* 'There is business in town' consists of topic *ch'engli* 'in town, town's interior' and comment *yu shih* 'there is business.' Even *yu shih*, which contains no topic, can easily stand as a whole sentence." [29]

The following is a rearrangement of Hockett's analysis.

	Topic	*Comment*	
S''-P'':	*Wo*	*chint'ien ch'engli yu shih.*	(I have business in town today.)
S'-P' :	*Chint'ien*	*ch'engli yu shih.*	(There is business in town today.)
S-P :	*Ch'engli*	*yu shih.*	(There is business in town.)
P :		*Yu shih.*	(There is business.)

It may be thought that though S'-P' has S' as its apparent topic, it is really about the implicit topic S''. That is, while the sen-

[29] *A Course in Modern Linguistics*, pp. 202-203.

tence says that there is business in town, what is meant is that *I* have business in town. If so, the function S'-P' performs is still that of describing and not that of stating. But this way of viewing the grammar of S'-P' is based upon two presuppositions, both of which I think are not justified. In the first place, it is assumed that the subject of a sentence must be a person, a thing, or their aggregates, and that a term like "today" or "August 6, 1960" can never introduce a subject. Specifically, it will be contended that "there is business in town today" is true only if someone has business in town today. It will be further argued that someone's having business in town today is not only one aspect of there being business in town today, but an essential aspect; no active agent, no business in town. The conclusion is therefore that "There is business in town today" really says "Someone has business in town today," and in the present context, the person denoted by "someone" is also denoted by "I."

But this type of reasoning can just as well be used to argue for the opposite conclusion. One can show for example that a certain day is the implicit topic of most sentences, thus: "The tree is bare" is true only if on a particular day X, it is bare. Therefore what the sentence really says is, "X is the day on which the tree is bare." The day X then is the implicit topic. This conclusion seems bizarre. But then, why should the other argument be judged differently?

In the second place, it is assumed that the tie between topic and comment is like a Christian marriage, fixed once for all. If P' *ch'engli yu shih* ('There is business in town') is part of a comment about S'' (*wo* 'I') in S''-P'', then according to this view, it is always a comment about S''. It is easy to understand why the structure of English would lead one to think so. For example, the comment "am busy" must take "I" as the topic. While expressions such as "smokes" in "John smokes" need not always be a comment about "John," it must at least be a comment about a topic of the same type, e.g., "Mary" or "he." And it seems a reprehensible sort of inconstancy for a comment like *ch'engli yu shih* 'there is business in town' to take *wo* 'I' as its topic in one context and to

take *chint'ien* 'Today'—a term of an entirely different type—as its topic in another.

But this is quite permissible in Chinese. For as Chao has pointed out, the topic is literally the subject matter of the sentence; the comment need not denote an action or a characteristic of what is denoted by the topic.[30] In discussing his example *Chien-ch'iao payüeh erhshihsanjih Kuochi Tungfanghsüehche Huiyi hsüantu lunwen* 'Cambridge August twenty-third International Orientalists Congress read papers,' he asks us to note that "neither 'Cambridge' nor 'August twenty-third' nor the 'Congress' performs the action of reading the papers, and yet the construction is correct Chinese."[31] Hockett puts the constrast between English and Chinese this way, "The tie in Chinese between topic and comment is to us unusually loose, particularly if we compare it only with the usual tie between subject and predicate in English."[32] Thus because the tie between topic and comment is loose, it is quite possible to break the old one and form a new one.

Specifically, P', *ch'engli yu shih* 'there is business in town' can be about different topics in different contexts. In S''-P'' it is about S'' (*wo* 'I'); that sentence, it will be recalled, meant "I have business in town today." But in S'-P' it is about S' (*chint'ien* 'today'); S'-P' meant "Today, there is business in town." The sentence *Chint'ien ch'engli yu shih* 'Today, there is business in town' literally says something about *Chint'ien* 'today,' and what is said about it is that there is business in town. Thus S'-P' is a statement in its own right, with its own topic and its own comment. It may be about an implicit topic, but it need not be. This is crucial. For by the above account, S'-P' is an element of a sentence, which, like the sentence itself, can make a statement. It is also a sentence which under the alias of P'' performs the describing function.

It should be apparent by now that Mrs. Daitz's main contention—a sentence and its elements are different in construction—is not valid with respect to Chinese. For we have seen that at least

---

[30] *Mandarin Primer*, p. 35.
[31] "Notes on Chinese Grammar and Logic," 39.
[32] Hockett, p. 203.

one Chinese sentence—the one analyzed by Hockett—has parts S'-P' and S-P, which are identical in construction with the sentence containing them.

Perhaps this heuristic device will make the foregoing discussion more intelligible. Translate *Wo chint'ien ch'engli yu shih* into "As for me, as for today, as for the town's interior, there is business." Now if we lop off one of the topic-introducing clauses, the remainder will generate another one. This is precisely how the Chinese sentence behaves.

Before concluding, I wish to discuss briefly two possible alternative analyses. First, can the sentence *Wo chint'ien ch'engli yu shih* be analyzed into *Wo chint'ien ch'engli* 'I today in town' and *yu shih* 'have business'? The answer is that this analysis is ruled out by the criterion of pause, which, it will be recalled, is our sole criterion for analyzing a sentence into topic and comment. The pause definitely comes between *wo* 'I' and *chint'ien ch'engli yu shih* 'Have business in town today.' (I should add parenthetically that a pause is a pause and not an interruption caused by psychological or physical interruption, such as stalling.) Unless another criterion is employed, no other division is possible. Thus while the suggested analysis yields two parts neither of which can state, it is not based upon the chosen criterion.

Secondly, can Hockett's sentence be considered a relational sentence $R(S, S', S'')$—in circumlocution: *I*, *today*, and *the town's interior* are related to each other by there being business? Such an analysis can at least erase the difference between English and Chinese. For there are relational sentencs in English like "John married Mary in the Riverside Church with Reverend Smith as the officiating priest," which has several parts that can state, viz., "John married Mary in the Riverside Church," "John married Mary," and "John married." We should therefore ask, might not the conclusion be different if instead of a nested topic-comment analysis, the sentence is considered to be of the type $R(S, S', S'')$?

This question has already been answered. If Hockett's example is given a relational analysis, so should Mrs. Daitz's example "My cat sits on his cushion." The result, as we have seen, is to make "My cat sits" a part of the sentence "My cat sits

on his cushion," thus invalidating Mrs. Daitz's thesis with respect to English. It is for the purpose of obviating that conclusion that the grammatical criterion is adopted. But the very grammatical criterion, when generalized, shows that her statement "a sentence states, but its elements cannot state" is not valid with respect to Chinese. Therefore no matter which criterion is chosen, her philosophical thesis (in two different senses) is relative to its object-language.

(D) *Strawson on Subject-expression and Predicate-expression*

It is generally assumed that a sentence and its two parts—that is, subject and predicate—have three mutually exclusive functions, namely to state, to refer and to describe. It is further assumed that parts of a sentence can never function as a sentence. This is essentially Mrs. Daitz's thesis which we have just argued against. Mr. Strawson has a thesis very similar to that of Mrs. Daitz's. In a recent article,[33] he defended a contention to the effect that a predicate can never be part of a subject. His aim in that article is to reinstate the traditional doctrine that the subject-predicate distinction in grammar parallels the particular-universal distinction in logic. For this purpose he proposed two criteria for the subject-predicate distinction which he calls respectively "the 'grammatical' criterion" and "the 'category' criterion." He then proceeds to show that the two mutually independent criteria "appear to be harmonized in linguistic practice, even when (so to speak) it costs language an effort to harmonize them" (p. 192). His grammatical criterion—the topic of this section—is based upon the alleged fact that a predicate-expression "demands a certain completion, namely completion into a proposition or propositional clause" (p. 196). This criterion, moreover, is presented by Strawson as an item of global grammar, when in fact, as I will try to show, it has only regional significance.

According to Strawson, the principal difference between what

[33] P. F. Strawson, "Proper Names," *Proc. Aris. Soc. Supp.*, xxxi (1957), 191-228. All subsequent references by page number alone are to this article. The same argument also appears in Strawson's book, *Individuals, An Essay in Descriptive Metaphysics* (London, 1959), esp. pp. 147-166.

he calls subject-expressions like "Socrates" and "John" and predicate-expressions like "is wise" and "smokes," is that subject-expressions "introduce their terms in a grammatical style (the substantival) which would be appropriate to any kind of remark (command, exhortation, undertaking, assertion) or to none," (pp. 193-194) whereas predicate-expressions "introduce their terms in a very distinctive grammatical style, *viz.* the assertive or propositional style" (p. 194).

By using "the assertive or propositional style" Strawson intends to register two facts. First, the expressions "smokes" and "is wise" occur only in three types of sentences or clauses-assertions "Socrates is wise," "John smokes"), questions ("Who smokes?" "Who is wise?"), and conditional clauses ("If Socrates is wise . . ." "If John smokes . . .) (p. 194). With those who agree that all three types of sentences or clauses make assertions, Strawson can assert that predicate-expressions introduce their terms in the assertive style. That is his maximal claim. But the minimal claim Strawson thinks he is entitled to make is that "is wise" and "smokes" occur only in propositions, and therefore they introduce their terms in the propositional style. That is why he employed the alternation "the assertive or propositional style"—"propositional style" being included as a concession to those who remain unconvinced by his argument that questions and conditional clauses make assertions.

Secondly, and this is his most important insight, Strawson thinks that this characterization of predicate-expressions makes it possible to understand Frege's metaphors which depict predicate-expressions as "'incomplete' or 'unsaturated'"[24] (p. 196). He argues on behalf of Frege against critics like Ramsey "that the expressions 'smokes' and 'is wise' seem more incomplete then expressions 'Socrates' and 'John,' just because they are, in a sense, nearer completion. The name 'Socrates' might be completed into any kind of remark (or clause), not necessarily a proposition, or it might stand by itself as designating an item in a list; but the expression 'is wise' demands a certain kind of completion, namely

[24] Frege's original remark appears in "On Concept and Object," *Philosophical Writings of Gottlob Frege*, eds. Geach and Black, p. 54.

completion into a proposition or propositional clause" (p. 196). Borrowing W. E. Johnson's expression,[35] he summarizes his argument thus, "the predicate-expression not only introduces its term, it also carries the assertive tie" (p. 195).

As I have detailed my criticism of Strawson elsewhere,[36] I will, for the sake of brevity, only indicate the main features of the contradicting evidence. It is quite clear that Strawson's thesis is based upon two facts of English grammar. One, the verb in the predicate-expression must be inflected to agree with the noun-subject in number and in person, and has a specific tense form and mood (e.g., indicative). Two, the particular type of inflection ("is wise" "smokes")—the kind appropriate to a third person singular subject in present tense[37]—is so specialized as to prevent the predicate-expression from appearing as another part of speech. That is to say, while expressions such as "wisdom," "he is a wise man," "to be wise is not easy," and "he wisely gives up smoking" contain a form of "wise" or "smoke," they do not contain "is wise" or "smokes" *in toto*. Thus Strawson's observation that "is wise" and "smokes" demand a certain kind of completion is verified as far as English is concerned. Taking these facts as our clue, we can, following Strawson's footsteps, give a definition of the following kind: A *predicate-expression* is an expression which can be completed only into a proposition or propositional clause.

But is this definition universally valid? Are there not expressions in Chinese that failed to satisfy this definition? What would an instance of "assertive tie" be like in Chinese? Would Frege and Strawson describe the Chinese equivalent to "is wise" and "smokes" as " 'incomplete' or 'unsaturated' "? These are questions, I am sure, many readers would like to have answered, and they should concern Strawson. For his aim is certainly not just

---

[35] Johnson's original expression can be found in his *Logic*, Part I (Cambridge, 1921), p. 12.

[36] See my "Subject and Predicate; A Grammatical Preliminary" to be published in a forthcoming (1961) issue of the *Philosophical Review*. I am grateful to the editors for permission to reproduce several paragraphs from that paper.

[37] Since Strawson restricts his attention to proper names, third person singular subject is selected by implication.

to show that the subject-predicate distinction in English parallels the particular-universal distinction in logic but that the parallelism holds universally. Now it would be untrue to say that Strawson is unaware of these problems. Unlike Mrs. Daitz who silently passes over the question of universality, Strawson discussed the issue at some length and did so repeatedly. In the original article "Proper Names" he says in a footnote, "It should be noticed that, in drawing the distinction between A-expression and B-expression [these are his synonyms for subject-expression and predicate-expression], I am not merely exploiting the fact that English is a comparatively uninflected language, especially as regards its noun-forms. . . ." (p. 195, footnote). In his book *Individuals, An Essay in Descriptive Metaphysics*, he is even more explicit. Prior to the introduction of the grammatical criterion he remarked that "In relying upon the grammatical phrase, 'substantival expression' and 'expression containing a verb in the indicative mood,' [to make the distinction between subject-expression and predicate-expression] the distinction seems both parochial and unexplained: parochial, because grammatical classifications adapted to one group of languages do not necessarily fit others which may be equally rich; unexplained . . ." (p. 148). Thus all available evidence leads us to believe that Strawson realizes the importance of the issue, regards parochialism as undesirable, and by the clearest implication, considers himself to be engaged in global-grammatical investigation.

But there is a discrepancy between the theory of Strawson and the facts of Chinese grammar. Strawson's criterion, as noted before, is based upon the fact that the verb in the predicate-expression must be inflected to agree with the noun-subject in number and in person. Chinese verbs are neither inflected for number nor inflected for person. Consequently as the following example will show, the Chinese counterpart of "smokes" and "is wise" do not—Strawson thinks they do—demand to be completed into a proposition or propositional clause.

Yu-tang ch'ouyen means "Yu-tang smokes"; this qualifies *ch'ouyen* as the counterpart of "smokes." But *ch'ouyen* 'smokes' can be completed into many kinds of remark (or clause), all of

which are non-propositional. For example, *ch'ouyen* can be a subject, *Ch'ouyen puhao* 'Smoking is not good (for one's health or the like)'; a part of an adjective, *Ch'ouyente jen ch'angch'ang shengping* 'He who smokes frequently gets ill.'; or an imperative, *Ch'oueyn!* 'Smoke!'

To make the discussion simpler—and to be perfectly frank, the facts more favorable—let us change "is wise" to "is clever." *Yu-tang ts'ungming* means "Yu-tang is clever"; thus *ts'ungming* is the counterpart of "is clever." Like our previous example, *ts'ungming* also can play many parts of speech. It can be an adjective, *Ts'ungming jen shao* 'The clever ones are few'; a part of an adverb, *T'a hen ts'ungmingte tsou le* 'He very cleverly left'; or a subject, *Ts'ungming yu shihhou hai jen* 'Cleverness (or being clever) sometimes leads people astray.'

It is now apparent that Strawson's criterion has only regional significance. Except for a few rare exceptions, predicate-expressions in Chinese do not demand to be completed into propositions or propositional clause. And in so far as the doctrine of the "assertive ties" rests upon the required agreement between the noun-subject and the verb, Chinese predicate-expressions do not carry assertive ties.

Frege's depiction of predicate-expressions as being " 'incomplete' or 'unsaturated,' " which Strawson seconded, can also be clarified by contrasting English with Chinese. One reason, and I think the main one, why "is wise" and "smokes" are depicted as being " 'incomplete' or 'unsaturated' " is that these expressions hardly ever occur alone. A subject-expression like "Socrates" can be used in itself as salutation, command, and exclamation ("Socrates!"). Questions ("Socrates?") and assertions ("Socrates.") may also consist only of the word "Socrates." Predicate-expressions behave differently—that is, at least in English they do. In asking a question ("Smoke?") and making a command (Smoke!") "smoke" instead of "smokes" is used. One can of course sometimes use the latter to answer a question. For example, "What does he usually do at this time of day?" "Smokes." But one hardly ever uses "is clever" alone. Instead, "clever" is used,

for example, in asking and answering a question ("Clever?" "Clever.") and in exclaiming ("Clever!").

In this respect Chinese again differs from English. *Yu-tang* behaves like "Socrates," as one would expect. But the predicate-expressions *ts'ungming* 'is clever' and *ch'ouyen* 'smokes' perform all the functions not performed by their English counterparts. Thus *Ch'ouyen?* 'Smoke?' an invitation to smoke, *Ch'ouyen!* 'Smoke!' a command, and *Ch'ouyen.* 'Smoke(s).' an answer to a question, all use the same *ch'ouyen* as the predicate-expression. Similarly the exclamation *Tsungming*! 'Clever!', the question *Tsungming*? 'Clever?', and the assertion *Ts'ungming.* 'Clever.' all use the same *ts'ungming.* It is therefore difficult to see why Chinese predicate-expressions should be depicted as " 'incomplete' or 'unsaturated.' " Moreover, from the evidence just exhibited, Chinese predicate-expressions can also be said to "introduce their terms in a grammatical style which would be appropriate to any kind of remark (command, exhortation, undertaking, assertion) or to none" (pp. 193-194)—a description Strawson reserved exclusively for subject-expressions.

To conclude. The validity of Strawson's philosophical thesis, like that of Mrs. Daitz, is relative to its object-language. It is valid with respect to English, but totally invalid with respect to Chinese.

Perhaps I should end this paper with a disclaimer to the effect that I have not touched the question "Are philosophical theses relative to language?" For the theses discussed by me—those taken from Frege, Ryle, Mrs. Daitz and Strawson—all turn out to be, in one way or another, not philosophical theses but grammatical theses. And it is but a truism to say that grammatical theses are relative to language. The disconcerting fact is that current philosophical literature seems to be saturated with such "philosophical theses." [38]

University of Pittsburgh.

---

[38] I wish to acknowledge my great indebtedness to Professors Y. R. Chao, Paul Weiss, and John Lachs, and to my father, Professor Y. P. Mei, all of whom read an earlier draft of this paper and gave me much encouragement and suggestions for improvement.

CRITICAL STUDIES

THINGS AND PERSONS

ALVIN PLANTINGA

RECENT YEARS have seen a resurgence of interest in such traditional problems of metaphysics as the problem of universals, of other minds, of the nature of predication, of the nature of time and space, of whether and in what sense material objects are "basic," and the like. P. F. Strawson's book, *Individuals*,[1] is an important product of that renewed interest. Exciting, able and challenging, the book is also, unhappily, obscure. It is as if Strawson were so eager to pursue the main vision, that he had neither the space nor the inclination to work out carefully the connections between the various things he says or the arguments for his crucial contentions—connections and arguments which are often essential for an understanding of the book as a whole or the main points it makes. Since I am less than confident of my understanding of the book, I offer what follows with diffidence; and my critical remarks are to be taken in the spirit of queries, requests for clarification, rather than as settled criticisms.

Individuals is divided into two parts. In Part I, Strawson tries to show that there is an important sense in which *material objects* and *persons* are *basic particulars*. In Part II "the aim is to establish and explain the connexion between the idea of a particular in general and that of an object of reference or logical subject" (11-12). Part II contains a wealth of interesting material and ingenious argumentation. Most important here, perhaps, is Strawson's attempt to provide criteria for distinguishing subjects from predicates and particulars from universals, and to show a philosophically important link between the subject-predicate distinction and the particulars-universals distinction. What he says

[1] *Individuals. An Essay in Descriptive Metaphysics*, London, Methuen & Co., Ltd. 1959. Unless otherwise noted page references are to that book.

on this head is of considerable interest indeed.[2] Nevertheless, I shall deal only with Part I. First I shall recount and comment upon the argument for the view that material objects are basic; then I shall state and examine what Strawson has to say about *persons* in more detail.

I

"Material objects are *basic* particulars." To understand this we must first note what Strawson says about *identification*; for material objects, he holds, are basic with respect to identification. Roughly, to identify a particular about which one makes a remark is to pick it out, conceptually discriminate it from other particulars (speaker identification); and to identify a particular about which someone else has made a remark is to know which particular it is that has been referred to in that remark (hearer identification). In explaining this Strawson speaks of the criteria or *requirements* of identification:

> It seems that the general requirements of hearer-identification could be regarded as fulfilled if the hearer knew that the particular being referred to was identical with some particular about which he knew some individuating fact, or facts, other than the fact that it was the particular being referred to. To know an individuating fact about a particular is to know that such-and-such a thing is true of that particular and of no other particular whatever. . . . This, then is the general condition for hearer identification in the non-demonstrative case; and it is obvious that, if a genuine reference is being made, the speaker, too, must satisfy a similar condition. (23)

How is this requirement ordinarily fulfilled? The answer is that the individuating fact known about a particular by someone identifying it is a fact which locates it in "our common spatio-temporal framework" or uniquely relates it to some other particular whose place in the framework is known:

> Yet it cannot be denied that each of us is, at any moment, in possession of such a framework—a unified framework of knowledge of particulars, in which we ourselves and, usually, our immediate surroundings have their place, and of which each element is uniquely related to every other and hence to ourselves and our surroundings. It cannot

---

[2] Strawson's discussion is easier to understand if one reads Ramsey's "Universals" (*Foundations of Mathematics*) in connection with it.

> be denied that this framework of knowledge supplies a uniquely efficient means of adding identified particulars to our stock. This framework we use for this purpose: not just occasionally and adventitiously, but always and essentially. (24)

It might be objected that *any* individuating fact about a particular satisfies the requirement laid down for identification; why then the pre-eminence accorded spatio-temporal relations? Strawson replies by disputing the suggestion that one could know an individuating fact about an individual without knowing something about that individual's relations to items whose place in the spatial-temporal framework is known; and he adds that even if the suggestion were made good the achievement would remain "peculiarly useless":

> Even if it were possible to satisfy the formal conditions of particular-identification in a way which left the particular completely detached and cut off, as it were, from the general unified framework of knowledge of particulars, the achievement would be a peculiarly useless one. *So long as our knowledge of it retained this completely detached character*, the particular would have no part to play in our general scheme of knowledge; we could for example, learn nothing new about it except by learning new general truths. I do not think we need pursue the question any further; for it is obvious enough that the possibility envisaged, if it is one, plays no significant part in our general scheme of knowledge of particular things. (28; Strawson's italics.)

The argument this far is obviously not tight; but Strawson takes its upshot to be that we can identify particulars only if we employ "a single unified spatio-temporal system." And the next step in the argument is the claim that we can have such a system only if we are able to *re-identify* objects—i.e., able to identify object B encountered at time $t2$ as the *same object* as object A encountered at time $t1$. Hence we must have "criteria of re-identification."

> Why are criteria of re-identification necessary to our operating the scheme of a single unified spatio-temporal framework for referential identification? . . . Evidently we can sometimes referentially identify a member of the spatio-temporal framework by giving, or being given, its position relative to others. No less evidently we cannot make the identification of every element in the system in this way relative to that of other elements. An immediate answer is that we have no need to, because we can identify some elements by direct location.

> But this answer, by itself, is insufficient. For we do not use a different scheme, a different framework, on each occasion. It is the essence of the matter that we use the same framework on different occasions. We must not only identify some elements in a non-relative way, we must identify them as just the elements they are of a single continuously usable system of elements. For the occasions of reference themselves have different places in the single system of reference. We cannot attach one occasion to another unless, from occasion to occasion, we can re-identify elements common to different occasions. (32)

Here we come to the heart of the argument. To say that a given kind of particulars is *basic* is to say something like the following: particulars of kind *a* are basic particulars if and only if we can identify particulars of kind *a* without referring to particulars of any other kind, and there are particulars of some other kind such that we cannot identify particulars of that kind without referring to particulars of kind *a*. (Such things as pains and after images, says Strawson, are examples of particulars that are *not* basic; for in general we can identify a pain only as So and So's pain. Our identification of pains essentially involves a reference to particulars of a different type, namely persons.) And from the premise that we can identify particulars only by relating them uniquely to this "unitary spatio-temporal framework" Strawson infers that material bodies are basic particulars in the above sense:

> It seems that we can construct an argument from the premise that identification rests ultimately on location in a unitary spatio-temporal framework of four dimensions, to the conclusion that a certain class of particulars is basic in the sense I have explained. For that framework is not something extraneous to the objects in reality of which we speak. If we ask what constitutes the framework, we must look to those objects themselves, or some among them. But not every category of particular objects which we recognize is competent to constitute such a framework. The only objects which can constitute it are those which can confer upon it its own fundamental characteristics. That is to say, they must be three-dimensional objects with some endurance through time. They must also be accessible to such means of observation as we have; and since those means are strictly limited in power, they must collectively have enough diversity, richness, stability and endurance to make possible and natural just that conception of a single unitary framework which we possess. Of the categories of objects which we recognize, only those satisfy these requirements which are, or possess material bodies—in a broad sense of the expression. Material bodies constitute the framework. Hence, given a certain general feature of the conceptual scheme we possess, and given

> the character of the available major categories, things which are or possess material bodies must be the basic particulars. (39)

This argument is extraordinarily puzzling; and indeed Strawson himself seems to distrust it.[3] Accordingly he gives a different argument (or perhaps an explication of the same argument): first he points out that if a class of particulars is basic, then particulars of that class must be "publicly observable" (45); he then asks what categories of publicly observable entities are available. As it turns out, there are three such categories: (1) events and processes, (2) states and conditions, and (3) material bodies or things possessing material bodies. Strawson's argument in essence consists in showing that due to "the contingent limitation of human powers" particulars of groups (1) and (2) do not provide "frameworks of the kind which are at all adequate to our referring needs"; they do not provide frameworks which could be used for identificatory purposes. Material bodies, on the other hand, can and do provide such a framework; hence they and they alone are basic particulars.

Strawson's argument is unusually difficult to summarize; for one thing its richness and complexity are thereby lost, and with them something of the argument's strength. And it must be added that it is next to impossible to state the argument (or any important stage of it) precisely; for at every step possible ambiguities and actual obscurities crop up. Nevertheless the above is not an altogether unfair summary: at any rate it represents something of the tenor of the argument. I want to elucidate and comment upon one stage of that argument.

In arguing that our ability to *re-identify* particulars is a necessary condition of our "operating the scheme of a single spatio-temporal framework," Strawson distinguishes *qualitative* identity from *numerical* or *particular* identity. Though he does not give a *definition* of either, he indicates the distinction he has in mind by an example; and a necessary condition of the numerical identity of individual a at time t with b at some later time t', in Strawson's

[3] "To rest any philosophical position on an argument so general and so vague would be undesirable" (40).

use, is that there be no time between t and t' at which neither a nor b exists (34). To *re-identify* a particular, then, is to identify it as (numerically) the same particular as one encountered on a previous occasion.

Now the distinction between qualitative and numerical identity is easy to apply in the case of objects which are under observation—say two cigarettes of the same brand on the table before me. But very often, of course, a particular is not under observation at every moment of its existence; and very often we judge that particular a at time t is numerically identical with b at t' when there was a time between t and t' at which the particular in question was not under observation. And here we encounter a venerable problem. We *think* we have the right to make the distinction between qualitative and numerical identity in the case of particulars which are not under continuous observation; but *do* we? Suppose I leave my room and return five minutes later: what is my reason for assuming that the desk in the room when I return is numerically identical with the desk that was there when I left? What gives me the right to believe that my desk has enjoyed uninterrupted continuity of existence in my absence? Isn't it true, the skeptic might urge, that in the cases where we are inclined to judge that a at t is numerically identical with b at t' (where there was a time between t and t' at which neither a nor b was under observation) the most we have a right to be sure of is that a and b are *qualitatively* identical?[4]

The first answer might be that we have *criteria* for determining whether in such a case a and b are numerically identical or only qualitatively identical. But, the skeptic replies, why do we take it that the satisfaction of these criteria guarantees numerical identity? For surely it is logically possible in any given case that though the criteria have been fulfilled, a and b are not numerically identical. Surely we can't construct a deductively valid argument for the conclusion that a and b are numerically identical from premisses stating that the criteria for particular identity have been fulfilled. Nor could we construct a good inductive argument for

[4] Compare Hume's *Treatise*, Part IV, Sections ii, vi.

the same conclusion, for there is no way, independent of the criteria in question, of knowing of temporal continuity of existence in cases of non-continuous observation. Why then do we accept the satisfaction of these criteria as a guarantee of particular identity? All we can be sure of in these cases, declares the skeptic, is qualitative identity.

Here Strawson makes an extremely interesting move; he gives a refutation of the particular-identity skeptic by contending that the skeptic cannot so much as *state his doubts* without tacitly accepting the very distinction he impugns. I quote in full the passage in which this argument occurs:

> There is no doubt that we have the idea of a single spatio-temporal system of material things; the idea of every material thing at any time being spatially related, in various ways at various times, to every other at every time. There is no doubt at all that this *is* our conceptual scheme. Now I say that a *condition* of our having this conceptual scheme is the unquestioning acceptance of particular-identity in at least some cases of non-continuous observation. Let us suppose for a moment that we were never willing to ascribe particular-identity in such cases. Then we should, as it were, have the idea of a new, a different, spatial system for each new continuous stretch of observation. . . . Each new system would be wholly independent of every other. There would be no question of *doubt* about the identity of an item in one system with an item on another. For such a doubt makes sense only if the two systems are not independent, if they are parts, in some way connected, of a single system which includes them both. But the condition of having such a system is precisely the condition that there should be satisfiable and commonly satisfied criteria for the identity of at least some items in one sub-system with some items in the other. This gives us a more profound characterization of the skeptic's position. He pretends to accept a conceptual scheme, but at the same time quietly rejects one of the conditions of its employment. Thus his doubts are unreal, not simply because they are logically irresolvable doubts, but because they amount to the rejection of the whole conceptual scheme within which alone such doubts make sense (35. Strawson's italics).

This is a fascinating argument, replete with Kantian overtones. I wish to examine it more closely. But here a note of caution must be sounded; the argument is not easy to state, and I am not altogether confident that what follows is the only plausible interpretation of the passage in which it is given. But at any rate it is *a* plausible interpretation, and an interesting one.

We must be careful to note exactly what the skeptic, as Strawson depicts him, is contending. He is holding, first, that a necessary condition of particular-identity is temporal continuity of existence; and in this Strawson concurs. He is agreeing, secondly, that we do have criteria for particular-identity in cases where temporal continuity of existence is not observed, and that these criteria are in fact often fulfilled. But his skepticism consists in his *questioning* these criteria; in his *doubting* that their fulfillment ever gives us adequate ground for asserting particular-identity. And Strawson's aim is to show that such doubt is radically absurd by showing that a necessary condition of the very meaningfulness of the skeptic's doubt is his unquestioning acceptance of particular-identity in some cases where temporal continuity is not observed. In the following outline of Strawson's argument I shall stick as close as possible to his own words:

(1) Spatial systems S and S′ are sub-systems of the same spatial system if and only if there are some particulars that are members of both S and S′. [5]

(2) Spatial systems S and S′ are different spatial systems if and only if they are not sub-systems of the same spatial system.

(3) So if we never unquestioningly accepted particular-identity where temporal continuity of existence is not observed, we should have the idea of a different spatial system for each new continuous stretch of observation.

(4) If spatial systems S and S′ are different spatial systems, any doubt as to whether an item in system S is numerically identical with an item in S′ is senseless.

(5) So if we had a different spatial system for each new continuous stretch of observation, any doubt as to whether an item observed in one continuous stretch of observation is numerically identical

[5] (1) obviously needs amendment. As it stands, it entails that if S and S′ lack a common member, then they aren't sub-systems of the same system *even if* there is a third system S″ which shares a member both with S and S′; and Strawson evidently does not wish to accept that consequence. The difficulty can be overcome by (a) defining "neighboring sub-systems" in the way (1) defines "sub-systems of the same spatial system" and (b) defining "sub-systems of the same spatial system" as follows: S and S′ are sub-systems of the same spatial system if and only if S and S′ are members of a set of neighboring sub-systems such that each member of the set is a neighbor of at least one other member of the set. I leave the reader to make the necessary qualifications in the ensuing discussion.

with an item observed in some other continuous stretch of observation would be senseless.

(6) Therefore if we never unquestioningly accepted particular-identity where temporal continuity of existence was not observed, we should never be able to raise a sensible doubt as to whether particular a, observed at t, is numerically identical with particular b, observed at t', if there was a time between t and t' at which neither a nor b was observed.

And presumably the skeptic is in just the unhappy position proscribed by (6)—i.e., he recommends that we unquestioningly accept particular-identity only where there is observed continuity of existence, yet he still wonders whether in fact there is or isn't particular-identity in cases where continuity of existence is *not* observed.

Is Strawson's argument acceptable? It has more than one difficulty, but the crucial problem here is to evaluate step (3). And here the phrase "continuous stretch of observation" is crucially ambiguous. Strawson may mean by it *either* (1) a period of time during which a single particular is always under observation by *someone or other*, or (2) a period during which a single person is always observing some object or other. And depending upon which of these is intended here, there are two quite different skeptics under attack. One is the moderate skeptic who is doubtful of the particular identity of a at t with b at t' only if there was a time between t and t' at which *no one* was observing either a or b. The other, the radical skeptic, is doubtful of the particular identity of a at t with b at t', in any case in which *he has not himself* continuously observed the particular which both a and b name from t to t'. I am *inclined* to think that it is the moderate skeptic Strawson means to be attacking here. But the text doesn't indicate which he has in mind; hence we must examine the argument under both interpretations of "continuous stretch of observation."

Suppose we take the first interpretation of that phrase. Step (3) may then be rewritten as follows:

(3′) If we never unquestioningly accepted particular-identity where temporal continuity of existence was not observed, then whenever we observed a particular a at time t and a particular b at time t' and there was a time between t and t' at which neither a

> nor b was observed, we should think that a and b belonged to different spatial systems.

Strawson evidently thinks that steps (1) and (2) of the argument entail (3). Now (2) is the immediate consequence of a *definition* (of "different spatial systems") and is therefore a *necessary* proposition; likewise (1), as a statement of the necessary and sufficient conditions of "system-inclusion" for spatial systems, is presumably necessary. (3), on the other hand, appears to be a *contingent* statement as to what human beings would think or believe in certain circumstances. It is therefore extremely difficult to see how (1) and (2) could entail (3′). What's meant here, I gather, is that (1) and (2) entail that if there were no particular-identity where there was no observed temporal continuity of existence, then there would in fact be a different spatial system for each new stretch of continuous observation; and human beings generally believe (or ought to believe, perhaps) that that proposition is true. About this claim as to what people do or do not think I have nothing to say; the interesting question here is whether what they are said to believe is in fact so, that is, whether in fact (1) and (2) entail

> (3″) If there is no particular-identity where there is no observed continuity of existence, then if a particular a is observed at t and a particular b is observed at t' and there is a time between t and t' at which neither a nor b is observed, then a and b belong to different spatial systems.

I said this is the interesting question, because (2), as the consequence of a definition, is unexceptionable and (1) seems at least plausible[6], while (3″) is utterly incredible. And in fact the entailment doesn't hold, as the following example indicates. Suppose that spatial system S consists in particulars a and c at time t, while system S′ consists in particulars b and c at time t'. Suppose further, that though a is observed at t and b is observed at t', there is a time between t and t' at which neither a nor b is observed. Suppose finally that c is observed from t through t'. Now let us grant (1), (2) and the antecedent of (3″), i.e., that there is no partic-

[6] Although someone might object that it entails the "relative theory of space," a theory which isn't subscribed to by all philosophers.

ular-identity where there is no observed continuity of existence. The consequent of (3″) is itself a conditional; and the antecedent of that conditional is true of our example. Does it follow that S and S′ are *different* spatial systems, i.e., not sub-systems of the same system? Surely not, for *c* is a member of both S and S′; hence by (1) S and S′ *are* sub-systems of the same system.

What the example shows is that even if the moderate skeptic accepts (1) and (2) he can be doubtful of or deny particular-identity where temporal continuity of existence is not observed while maintaining quite properly that no violence is thereby done to our "spatio-temporal conceptual scheme." For the condition of inclusion in a single spatial system laid down in (2) is satisfied for spatial systems S_1 to S_n if there is a set of overlapping cases of particular-identity such that for each system S and its successor S′ there is at least one particular which is a member both of S and of S′. Hence Strawson's condition for system inclusion is very often fulfilled to the skeptic's satisfaction; it is fulfilled, for example, if there is one particular which *is* under continuous observation —e.g., the door to Fort Knox. But it can be fulfilled much less exactingly; what's necessary is only that for every two successive instants there be a particular under observation at both instants. And the likelihood is that *that* condition has been satisfied as long as there have been users of language. Hence, the moderate skeptic argues, there is no reason at all to think that his doubts impugn the integrity of our "spatio-temporal conceptual scheme." And if so, his position hasn't been shown to be absurd after all.

One more remark about this argument against the moderate skeptic. Suppose he convinced us that we have no justification for ascribing numerical identity where temporal continuity of existence is not observed, and suppose we then refused to predicate numerical identity in any such cases. Suppose further that we came to believe that every so often there were stretches of time during which nothing at all was under observation. According to Strawson we should then no longer believe or be justified in believing that every material body at any time is spatially related to every other material body at every other time. But why should we think so? It seems more than likely that under these circum-

stances we should go on just as before. We should continue to use the same calendars, history books and the like; we should still think that Jerusalem in King Solomon's time was roughly one-hundred-fifty miles from the place where the Red Sea is now; that once there was a forested wilderness where New York City now stands. And in so thinking, we should betray no fundamental misconceptions or confusions. The moderate skeptic's doubts may indeed be empty; but the argument does not seem to show that they are misguided in the way Strawson suggests.

So much for the argument against the moderate skeptic. The situation is a bit different, however, if it is the *radical* skeptic Strawson is after. *He* holds that a person N has a right to be sure of the numerical identity of a at t with b at t' only if there was no time between t and t' at which N was observing neither a nor b. And Strawson's attack presumably goes as follows: "If you accept the numerical identity of a at t with b at t' only if there was no time between t and t' at which you were observing neither a nor b, then you will have a different spatial system for each new period during which you are continuously observing particulars. But if you have a different spatial system for each new continuous stretch of observation, you can't sensibly be in doubt about whether a particular a observed in one continuous stretch of observation, is numerically identical with b observed in a different stretch; for such a doubt makes sense only if a and b are *not* in different spatial systems. Hence you cannot sensibly doubt numerical identity in *every* case where you fail to observe continuity of existence; and if you share with the rest of us the conceptual scheme which we do in fact all have (according to which every particular at any time is spatially related to every other at every other time), you must accept particular-identity in at least some cases where you don't observe continuity of existence."

This argument seems considerably stronger than the argument against the moderate skeptic; nevertheless it will not suffice to put the radical skeptic out of business. His rejoinder, I think, will consist in pointing out two things. First, the argument doesn't show that there is any specific case or type of cases in which the skeptic must accept numerical identity in the absence of observed

continuity of existence. At best it shows that if he wonders whether a particular in one of his continuous stretches of observation is numerically identical with a particular in another such stretch, he must believe that there is some particular (or set of temporally overlapping particulars) which persists from the time of the earlier continuous stretch of observation to the time of the later one. But his accepting that belief is not inconsistent with his questioning, in each specific case, the criteria for numerical identity where continuity of existence is not observed. And secondly, the skeptic will point out, what Strawson's argument really shows is that in cases where *a* occurs in one continuous stretch of observation and *b* in another, the doubt is not merely as to whether *a* and *b* are numerically identical; it is also as to whether *a* and *b* are *in the same spatial system*. Nor is he likely to be impressed by Strawson's insistence that we do in fact have a conceptual scheme whereby every particular is spatially related to every other particular. For accepting that scheme consists partly, if Strawson is right, in holding the belief that for any moment t and its successor t' there is some particular existing both at t and t'; and the skeptic's claim is just that none of us has good reason to believe that. The fact that most of us *do* believe it is not likely to shake him; he's known all along that most of us (mistakenly in his view) are non-skeptics.

The upshot of the above discussion, I think, is that Strawson fails to refute either the moderate or radical skeptic; and insofar as that refutation is an essential stage in the argument for the basic character of material objects, we must conclude that the prospects for that argument are not bright.

II

Many recent philosophers have said that we predicate mental states—pains, attitudes, emotions, etc.—of others on the basis of their *behavior*. Some philosophers have held that propositions about mental states are in principle *analyzable into* propositions about behavior; that in principle for any proposition ascribing a mental state to some person N, there is a set of statements about N's

behavior which *entails* and is *entailed* by that proposition. Often called philosophical behaviorism, this position has suffered telling criticism. Others have offered a more sophisticated (and more obscure) suggestion to the effect that a man's behavior is our *criterion* for the ascription of mental states to him. Central to that view is an attack upon the supposition, often attributed to Descartes, that the relation between mental state propositions and behavior proposition is in every case merely inductive or contingent; it is argued that it is in general impossible to construct a cogent inductive argument whose premises are propositions about a man's behavior and whose conclusion is a proposition ascribing a mental state to that man. But what distinguishes this view from philosophical behaviorism is the denial, on the part of those who hold it, that mental state propositions are in general analyzable into or deductively related to behavior propositions. And what is puzzling about the view is the contention that though mental state propositions are not, in general, either inductively or deductively related to behavior propositions, behavior is nonetheless the *basis* for third person ascriptions of mental states, and is sometimes an entirely adequate basis—one such that given the behavior in question, there is *no doubt whatever* that the mental state proposition is true. As Strawson puts it, behavior in some cases at least furnishes us with *logically adequate criteria* for the ascription of mental state propositions (105)—where "logically adequate" is not, presumably, to be interpreted in terms of entailment. And this leaves the notion of "logically adequate criterion" shrouded in obscurity.

In the chapter entitled "Persons," Strawson reiterates this view. He goes beyond it, however, in maintaining, via an argument strongly reminiscent of some of Kant's transcendental arguments, not merely that this "criteriological" relation in fact holds between mental states and behavior, but that its holding is a logically necessary condition of the ascription of mental states either to oneself or to another. As I understand Strawson this is one important aspect of the central thesis of the chapter. That thesis is the contention that the concept of person is *logically primitive*. Precisely what is meant by that? It is not easy to be sure; but

there is reason to think that Strawson's view consists in the conjunction of the following three theses:

(a) the concept of a person is not to be analyzed, in the Cartesian fashion, as the concept of a "secondary kind of entity in relation to two primary kinds, viz. a particular consciousness and a particular human body" (105).

(b) the existence of logically adequate behavioral criteria for the ascription of mental states to others is a necessary condition of the ascription of mental states to anything at all (106), and

(c) there are many cases in which one has an entirely adequate basis for ascribing a mental state to oneself, although this basis is quite distinct from the basis upon which one ascribes that predicate to someone else (107).

These three theses are evidently the crucial contentions of the chapter and the heart of what Strawson has to say about persons. I propose to elucidate (a) and (b), and examine the arguments by which Strawson seeks to establish them, ignoring (c) altogether.

A

The Cartesian analysis of a person, as depicted by Strawson, represents a person as a union of two substances. These two substances are of different logical types: no property significantly predicable of one is significantly predicable of the other. What Strawson is rejecting, then, is the view that a person is really a composite of two substances such that to one of them mental predicates alone are ascribable while to the other only physical or bodily properties can be ascribed. Why does Strawson reject this view? His reasoning begins with the claim that "it is a necessary condition of ascribing states of consciousness, experiences, to oneself, in the way one does, that one should also ascribe them, or be prepared to ascribe them, to others who are not oneself" (99). Secondly, a necessary condition of the ability to ascribe states of consciousness to others is the ability to identity, referringly think about, those things other than oneself to which states of consciousness are to be ascribed. And thirdly, "if the things one ascribes states of consciousness to, in ascribing them to others, are thought of as a set of Cartesian egos to which only private

experiences can, in correct logical grammar, be ascribed . . ., then there is no question of telling that a private experience is another's" (100). The point here is that unless I have a way of distinguishing one particular of a given type from other particulars of that type, I am unable to ascribe any attribute to any member of that type. But if the particulars in question are "inaccessible" to me (in just the fashion that, on the Cartesian view, other selves are inaccessible) and if the attributes to be ascribed are likewise inaccessible in that same way, I don't have any way of distinguishing, in thought, one of the particulars of that type from others of the same type. And if I am unable to identify other subjects of experience, I am unable to predicate states of consciousness of others; hence I am unable to predicate them of myself. The Cartesian position, therefore, entails that no one is able to predicate states of consciousness of anything whatever; but since we clearly *are* able to predicate them of ourselves and of others, Cartesianism is false.

The Cartesian is likely to reply that the argument is an *ignoratio*. For he does not, of course, assert that only "private experiences can, in correct logical grammar" be predicated of selves or mental substances. After all Descartes held that there is a large class of selves such that to each of the members of this class a causal relationship to a physical body can correctly be ascribed. And, the Cartesian might continue, one could identify another subject of experience as "the subject of experience which stands to *that* body in the same way that the subject of my experiences stand to *this* body." But of course bodies other than my own are not inaccessible to me in the way in which another's states of consciousness are. Strawson takes account of this objection to his argument in the following words:

> But this suggestion is useless. It requires me to have noted that *my* experiences stand in a special relation to body M, when it is just the right to speak of *my* experience that is in question. That is to say, it requires me to have noted that *my* experiences stand in a special relation to body M; but it requires me to have noted this as a condition of being able to identify other subjects of experiences, i.e., as a condition of my having the idea of myself as a subject of experience, i.e., as a condition of thinking of any experience as *mine*. (101)

Now exactly *why* is the "right to speak of my experience" in question for the Cartesian? To find out, we shall have to formulate the argument against the Cartesian more precisely.

The first premise is explained in a long footnote (99); as stated in the text and explained in that footnote it is susceptible of several interpretations. I shall suggest an interpretation which seems to me likely both because Strawson's words suggest that he would accept it and because the premise so interpreted is plausible in its own right. But I shall not argue that my interpretation is in fact Strawson's meaning: such argument, I fear, would be necessarily inconclusive. Since the premise is a specification of a *general* principle governing predication, I shall state it without specific reference to mental substances and states of consciousness:

(1) A necessary condition of a person N's ascribing a predicate P to an individual *a* is that N have a conception of the appropriate occasions for ascribing P to individuals *other* than *a*.

(2) N's being able to *identify* individuals other than *a* is a necessary condition of N's having a conception of the appropriate occasions for ascribing P to individuals other than *a*.

The crucial word here is "identify." We should recall that the general requirement, with respect to identification, is the following:

(3) N can identify a particular only if N knows some individuating fact about that particular (p. 23, 181-183).

We are now in a position to try to understand why Strawson takes it that the Cartesian cannot identify other subjects of experience by means of some such locution as "the subject of experience that stands in the same relation to that body as the subject of my experiences stands to this body." One is immediately struck by the thought that perhaps Strawson is here using "necessary condition" in such a fashion that "N's doing *a* is a necessary condition of N's doing *b*" entails that N must do *a before* he can do *b*. At any rate on this interpretation Strawson's argument against the Cartesian would be valid. For premises (1) and (2) interpreted in this way entail that one must be able to identify other subjects of experience *before* one can predicate experiences of himself, i.e., before one can think of or refer to his own experiences

at all. And one can identify other subjects of experience in the way the Cartesian suggests only if one *is already able* to predicate experiences of himself, i.e., already able to recognize certain experiences as his own. But this is not, presumably, Strawson's meaning. For (1) and (2) state *general conditions* of predication. And under the present interpretation these conditions are logically incapable of fulfillment, not merely with respect to discourse in the Cartesian mode about other minds, but with respect to any predication of any property of any individual whatever. For under the interpretation in question, the above three principles come to the following: before I can predicate any property of any individual I must have a conception of the appropriate occasions for predicating that property of other individuals (1). Before I can have a conception of the appropriate occasions for predicating that property of other individuals I must be able to *identify* other individuals (2). And being able to identify an individual entails knowing some individuating fact about that individual (3). But if I know an individuating fact about an individual I am already able to predicate a property of that individual, the property, namely, which distinguishes it from other individuals. Hence before I am able to predicate any property of any individual I must be able to predicate some property of some individual; and it is accordingly logically impossible for me to predicate any property of any individual.

Let me try to state this argument a bit more precisely. In the long footnote I referred to above, Strawson says that a predicate is correlative with a range of distinguishable individuals of which it can be significantly, though not necessarily truly, affirmed. We may therefore say that every predicate *determines* a range of individuals—those individuals, namely, of which it can be significantly affirmed (and of course different predicates may determine the same range). Let us consider any predicate P and the range R of individuals it determines. We may restate Strawson's three principles as follows:

(1) Before a person N can predicate P of any individual *a* of range R, N must have a conception of the appropriate occasions for predicating P of other members of R.[7]

(2) Before N has a conception of the appropriate occasions for predicating P of other members of range R, N must be able to identify other members of R.

(3) If at time *t* N identifies any particular *b*, N knows some individuating fact about *b* at *t*.

But if at time *t* N knows some individuating fact about *b*, then at *t* N knows that a certain predicate Q applies to *b*.[8] So if at *t* N is able to identify other members of R, he must, at *t*, have a conception of the appropriate circumstances for predicating Q of individuals of range R. Now either P and Q are the same predicate or they are not. If they are the same, the (absurd) consequence is that N has a conception of the appropriate circumstances for predicating P of individuals of R before he has that conception. If P and Q are different, on the other hand, a vicious infinite regress ensues: for before N has a conception of the appropriate occasions for predicating Q of members of R he must be able to identify members of R. But whenever he is able to identify members of R he already has a conception of the appropriate occasions for predicating some third predicate O of members of R. And so on. The upshot seems to be that under this interpretation of Strawson's premises it is logically impossible for anyone to ascribe any attribute to anything.

If the above is correct, we do well to look for a different interpretation of Strawson's objection to the Cartesian. And a natural suggestion is that Strawson means, not that N's ability to identify other subjects of experience must be temporally prior to his ability to predicate experiences of them, but only that at any time at which N is able to predicate experiences of others, he must be able to identify them. Premises (1) and (2) then turn out as follows:

---

[7] I take Strawson's expression "having a conception of the appropriate occasions for predicating P" as roughly equivalent to "knowing the meaning of P."

[8] "To know an individuating fact about a particular is to know that such-and-such a thing is true of that particular. . . ." (23)

(1b) If N can predicate states of consciousness of himself at time t N has, at t, a conception of the appropriate occasions for predicating states of consciousness of others.

(2b) If N has a conception of the appropriate occasions for predicating states of consciousness of others, at t, N is able, at t, to identify other subjects of experience.

The discussion so far has centered about Strawson's claim that one who held a Cartesian position could not make a certain suggestion about the identification of other subjects of experience —the suggestion that another subject of experience could be identified as, e.g., "the subject of experience that stands in the same causal relation to *that* body as the subject of my experiences stands to *this* one." But now the question becomes acute: why *can't* the Cartesian stick with this suggestion? I should think he could comfortably agree to (1b) and (2b) while maintaining the thesis about identification Strawson denies him. With respect to (1b), for example, he might say the following: if N can predicate mental states of himself at time t, then at t N knows (or believes, thinks, etc.) that for any mental state M he predicates of himself, if he were to observe a correlation between a state B of his body and the presence of M, then any occasions on which he observes a body similar to his in state B is an appropriate occasion for predicating M of another subject of experience. And with respect to (2b) he might claim to be able to identify the subject of experience in question in just the way Strawson prohibits. I quoted above (p. 508) the argument Strawson produces at this point; but under the present interpretation of "necessary condition" that argument turns out to be nothing more than a restatement of principles (1b) and (2b).

We might be tempted to object that if the Cartesian were right *no one could ever know* that there were subjects of experience connected with bodies other than his own. But that would be to change the subject altogether; Strawson has maintained not merely that on Cartesian principles no one could know for sure that there were other subjects of experience (with that the Cartesian might happily agree), but that no one could so much as predicate experiences, states of consciousness, either of others or of *himself*. And if I have interpreted his argument aright, it

doesn't substantiate this claim. We seem to be left with the bare assertion that on the Cartesian view it is impossible to see how anyone could come by the concept of selfhood at all, or how anyone could form the idea of a subject of experience.

B

The second part of the thesis that the concept of a person is primitive has to do with what I called the "criteriological" relationship between behavior and mental states. In rejecting behaviorism, Strawson is rejecting the contention that every third person proposition ascribing a mental state is logically equivalent to a set of propositions which describe behavior. On the other hand, Strawson is emphatic in denying that the relation between mental-state ascribing propositions and behavior propositions is merely inductive or contingent. What, exactly, this relation is, is left obscure in Strawson's explanation as in every other I know of. But in any event, it seems to be held that if A is the criterion for B, then given A, there is no legitimate doubt that B is the case. And what Strawson seeks to establish is not merely that this criteriological relationship does in fact connect behavior and mental states, but that its connecting them is a necessary condition of our being able to predicate mental states either of ourselves or of others; he offers a "transcendental deduction" of the criteriological relation. I quote the argument in full:

> Clearly there is no sense in talking of identifiable individuals of a special type, a type namely, such that they possess both M-predicates and P-predicates, [9] unless there is in principle some way of telling, with regard to any individual of that type, and any P predicate, whether that individual possesses that P-predicate. And in the case of at least some P-predicates, the ways of telling must constitute in some sense logically adequate kinds of criteria for the ascription of P-predicates. For suppose in no case did these ways of telling constitute logically adequate kinds of criteria. Then we should have to think of the relation between the ways of telling and what the P-predicate ascribes, or a part of what it ascribes, always in the following way: we should have to think of the ways of telling as *signs* of the presence, in the

[9] A P-predicate is one which ascribes a state of consciousness, or implies the possession of consciousness of the part of that to which it is ascribed.

> individual concerned, of this different thing, viz., the state of consciousness. But then we could only know that the way of telling was a sign of the presence of the different thing ascribed by the P-predicate, by the observation of correlations between the two. But this observation we could each make only in one case, viz., our own. And now we are back in the position of the defender of Cartesianism who thought our way with it was too short. For what, now, does 'our own case' mean? There is no sense in the idea of ascribing states of consciousness to oneself, or at all, unless the ascriber already knows how to ascribe at least some states of consciousness to others. So he cannot argue in general 'from his own case' to conclusions about how to do this; for unless he already knows how to do this, he has no conception of his own case, or any *case*, i.e., any subject of experiences (105-106).

Let me try to state this argument a bit more precisely. In order to simplify matters I shall specify the argument with respect to a certain kind of mental state, pain, and the "ways of telling" appropriate to that state which I shall call P-behavior. Strawson's argument may then be outlined as follows:

(1) If P-behavior is not a logically adequate criterion for the ascription of pain, P-behavior is a *sign* of pain.

(2) If a person N knows at time t that P-behavior is a sign of pain, then at some prior time $t - 1$ N observed a correlation between P-behavior and pain in his own case.

(3) If at $t - 1$ N noted a correlation between pain and P-behavior in his own case, then N was able to predicate pain of himself at $t - 1$.

(4) If at $t - 1$ N was able to predicate pain of himself, then at $t - 1$ N knew how to predicate pain of others.

(5) If at $t - 1$ N knew how to predicate pain of others, then at $t - 1$ N knew that P-behavior is a sign of pain.

Step (6) would be a repetition of (2) with "$t-1$" substituted for "t" and "$t-2$" for "$t-1$". Steps (7), (8) and (9) would parallel (3), (4) and (5); step (10) would again parallel (2) with the substitution of "$t-2$" for "t" and "$t-3$" for "$t-1$"; and so on. The conclusion Strawson draws, of course, is that if P-behavior were not a logically adequate criterion for the ascription of pain, no one could ascribe pain to anyone else; and hence no one could ascribe pain to himself either. Once again there are various difficulties in Strawson's argument. I shall concentrate upon one which seems to me central. There is an ambiguity in the phrase "knows how to predicate pain of others" as it occurs

here. Step (4) in this argument is clearly intended to be identical with one of the premises we encountered in Strawson's argument against the Cartesian—the premise, namely, that was step (2) in that argument. (I shall call that premise the Predication Principle.) Accordingly (4) ought to be taken as

> (4a) If at $t-1$ N was able to predicate pain of himself, then at $t-1$ N had a conception of the appropriate occasions for predicating pain of others,

and (5) ought to be rewritten as

> (5a) If at $t-1$ N had a conception of the occasions appropriate for ascribing pain to others, then at $t-1$ N knew that P-behavior is a sign of pain.

But it is not at all clear that (5a) ought to be accepted. Suppose that in accordance with step (2) N could know that P-behavior is a sign of pain only if he had observed a correlation between P-behavior and pain. At time $t-2$, *before* he has observed any such correlation, N might make the following declaration: If I observe a connection between my pain and P-behavior on my part at $t-1$, then any occasion after $t-1$ on which I observe P-behavior which is not mine will be an appropriate occasion for predicating pain of someone else. If he were to make such a declaration, he would "have a conception of the circumstances appropriate for predicating pain of someone else," although he wouldn't then know that P-behavior is a sign of pain, for he wouldn't have made the requisite observation. Hence it seems that step (5) cannot be accepted.

Now for a couple of objections to my refutation. First, we should note that Strawson distinguishes a weaker and a stronger version of the Predication Principle (99). He claims that his arguments require only the weaker version, which is the one I have been ascribing to him and under which in fact the arguments are not sound. The stronger version of that principle asserts that a necessary condition of one's being able to predicate mental states of himself is that one *in fact* predicate mental states of others (as opposed to merely having a conception of the appropriate occasions for so predicating them). And someone might say that Strawson's argument can be rescued by employing the stronger

version of the Predication Principle. Here we must again remember the two possible interpretations of "necessary condition": the stronger principle *may* be asserting that before N can ascribe pain to himself he must have ascribed it to someone else. So taken, the principle has little to recommend it, for it is supposed to be a specification of a *general* principle about predication; but that general principle would then be the absurd assertion that before I can predicate any property of any one thing I must have predicated that property of something else. The other sense of "necessary condition" is not easy to apply to the Predication Principle in its stronger formulation, but presumably it would come to something like this: I can't have predicated pain of myself before I have predicated it of others—i.e., any time at which I predicate a mental state of myself is a time before which or at which I predicate that state of someone else. And the general principle of which this is a specification would be: Any time at which N predicates a property P of individual *a* is a time at which or before which N predicates that property of some other individual. This in turn entails that the first occasion on which anyone predicates a property of anything is one on which he predicates that property of *at least two things*. I take it that the principle so stated is utterly gratuitous and unworthy of further consideration. But a little reflection will satisfy anyone who is interested that the declaration I ascribed to N at $t-2$ can be reformulated so as to be consistent even with that peculiar version of the Predication Principle.

Second: it might be objected that it is ridiculous to suppose that N could make the declaration I ascribed to him before he had so much as noted a correlation between pain and P-behavior in his own case. And of course, the objector is right; it *is* ridiculous. Doubtless the envisaged state of affairs is psychologically impossible. But the objection is irrelevant; for Strawson's view is that it is a *necessary truth* that if "ways of telling" were never logically adequate criteria for third person mental state propositions, then no one could predicate mental states of anything whatever. Hence it is required only that it be *logically* possible for N to make the declaration I ascribed to him. The thesis that behavior is induc-

tively or contingently related to mental states is not a piece of genetic psychology.

Finally, it might be said that if N could make the declaration I ascribed to him, then he must have learned what pain is "from his own case," and that it is logically impossible for anyone to learn the meaning of "pain" from his own case. Granted that premise, Strawson's argument would be perfectly sound. And no doubt Strawson would accept the premise; indeed, he seems to believe that the argument we have been considering *proves* that contention. But in fact his argument, if I have grasped it, *presupposes* rather than proves the contention that it is logically impossible to learn the meaning of "pain" from one's own case. And of course that contention is far from obvious; an argument for it is required. An important question, therefore, for the view that the relation between pain and behavior is criteriological, is the question whether a cogent argument can be given for the principle that one can't learn the meaning of words like "pain" from one's own case.

I think it is appropriate to mention that at least two sorts of argument for this principle have been offered. One line of argument is the following: if one could learn what pain was from his own case, one could have a "private language"; but private languages are in principle impossible.[10] I shall not comment upon this argument here; suffice it to say that neither of its contentions is at all easy to establish and both require consideration of difficult and complex issues. The other sort of argument has also been suggested by Malcolm. Commenting upon a passage from Wittgenstein's *Investigations*, he says

> The argument that is here adumbrated is, I think, the following: If I were to learn what pain is from perceiving my own pain, then I should, necessarily, have learned that pain is something that exists only when *I* feel pain. For the pain that serves as my paradigm of pain (i.e., my own) has the property of existing only when *I* feel it. That property is essential, not accidental; it is nonsense to suppose that the pain I feel could exist when I did not feel it. So if I obtain my conception of pain from pain that I experience, then it will be part

[10] See N. Malcolm, "Wittgenstein's *Philosophical Investigations*," *Philosophical Review*, October, 1954, pp. 530-534.

> of my conception of pain that *I* am the only being that can experience it. For me it will be a *contradiction* to speak of *another's* pain.[11]

I shall conclude with a comment on Malcolm's argument. Its conclusion—that it is impossible to learn what pain is from one's own case—is just the one needed for Strawson's transcendental deduction of criteria. One might therefore say that Strawson's argument *presupposes* Malcolm's argument, or one like it; his own argument utterly fails to substantiate the claim that the relation between behavior and mental states is criteriological. Malcolm's argument, however, seems to employ something like the following principle:

> If all the objects from which I get my concept of C have property P *necessarily*, then for me "All C's have P" will be a necessary proposition.

So stated, the principle is objectionable. For objects don't have necessary properties *merely as objects*, so to speak; they have them only under or relative to certain descriptions. A cow necessarily has the property of being female—i.e., it is a necessary truth that if Bessie is a cow, then Bessie is female. But it's not a necessary truth that Bessie is female; nor that the object named by "Bessie" is a female kine. Consider any proposition of the form: It is a necessary truth that object A has property P. It is clear that "A has P" does not entail "A exists"; for if it did, "A exists" would be a necessary proposition; and propositions asserting that something or other exists are not, in general, necessary. Hence the proposition must be reformulated: It is a necessary truth that anything which is an A has P. But now it becomes clear that "A" is functioning as a *description*. And the question whether in fact "Anything which is an A has P" is necessary will turn on which description is to replace "A" and what property "P" denotes. Before we can understand and apply Malcolm's principle, therefore, we must be told what description it is, of the pains from which I get my concept of pain, under which it is necessarily true that all those pains are felt only by me.

---

[11] *Op. cit.*, p. 538.

Now at this point the following suggestion naturally arises:

> If the proposition that object A was one of the objects from which I got my concept of C entails the proposition that A has property P, then my conception of C is such that "All C's have P" is a necessary proposition.

So reformulated, the principle escapes the objection and entails that no one can learn the meaning of "pain" from his own case; for all the pains from which one could so learn what pain is are necessarily one's own. But so reformulated the principle won't do at all: the proposition that A is one of the objects from which I got my concept of C entails that I have *perceived* A; and hence *any* concept I get "from objects" will be such that it necessarily applies only to things I have perceived.[12] Of course, there may be other formulations of Malcolm's principle that are satisfactory. But what is clear is that this argument requires clarification and explanation.

The present status of the view that the relation between mental states and behavior is criteriological, therefore, seems to me to be this. What is needed above all is explanation and development of the two kinds of argument Malcolm discusses in "Wittgenstein's *Philosophical Investigations*." Pending such explanation the view in question remains an interesting but unsubstantiated speculation.

My comments upon Strawson's book have been mainly critical and destructive. I want to point out, in conclusion, that one *compliments* a book by subjecting it to careful, searching criticism. Strawson's book eminently deserves and richly repays that sort of compliment.

Wayne State University.

---

[12] I owe this point to Robert C. Sleigh, Jr. I take this opportunity to record my indebtedness to him and to my colleagues Edmund Gettier and Hector Castaneda, and to Nicholas Wolterstorff of Calvin College, for valuable criticism and discussion on several points in this paper.

KNOWLEDGE AND CHOICE

J. B. SCHNEEWIND

1. An interest in the nature of scientific theory has played a large part in the development of Pragmatism. In the higher reaches of science the view that a concept or idea is simply a copy of some given external reality seems singularly implausible, and the view that truth can be explained in terms of some sort of correspondence between propositions and facts seems similarly out of place. The reason is that one of the most striking features of a scientific theory is the degree to which choice is involved both in construction and in evaluation. Concepts and theories do not seem to be forced on us, so to speak, by the data. We must choose what concepts to use to organize the data, we must make choices among various available means for obtaining and checking data, we must decide how great a degree of accuracy will be required for the purposes to which we wish to put a theory, we must try to invent concepts and principles which will enable us to state theories more simply and thus make them more easily available for predicting and controlling future events, and so on. Sometimes there seem to be alternative theories each of which can explain a set of facts, and we must choose between them. While in all of these choices and decisions some role is undeniably played by merely given data, there is a large role played by means-ends considerations. The purposes for which we construct theories, the uses to which we want to put them, seem to a large extent to guide the choices which we must make in erecting and in deciding among them, and seem therefore to play a part in determining what the right theory is.

Now it is tempting to try to generalize the view that means-ends considerations play a part in determining what is the right theory. It is tempting, that is, to try to use a similar view to give an account of the nature of truth or knowledge quite generally. For can we not say that truth is simply what we ought to believe, and that knowledge is what we are justified in believing? After

all, terms like "true," "false," "probable," "doubtful," "known," "believed," and so on, are not merely descriptive terms. They are used to evaluate the degree to which a belief or proposition is one which we ought to accept. And if in the case of so important an area of human knowledge as scientific theory what we ought to accept is determined in large part by means-ends considerations, may it not be true that in other areas of human knowledge means-ends considerations have a similar function? Perhaps it would even be possible to define truth, or knowledge, in terms of what serves some end or purpose.

The difficulties with this view, however, have often been pointed out. They arise from two considerations. First, the notions of truth and of knowledge are common notions. The words "true" and "know" have a common use and in that sense have an established meaning. If a criterion or definition is to clarify the nature of truth or of knowledge, it must be a criterion or definition which would lead us to apply these terms to the same things to which we would naturally apply them. Second, there is a difficulty imposed by the nature of evaluation in terms of means and ends. In order to evaluate something as a means to an end, there is at least one condition that must be satisfied: it must be possible to define or describe the end without any reference to a specific means to its attainment. Consequently it must be possible to think of more than one way in which the end could be reached, though of course in practice only one way may be feasible. It is a further consequence of this condition that it must be possible to recognize that the end has been reached without knowing what means has been used to reach it. An end is essentially something that can be brought about in a variety of ways, and a choice among means is necessarily a choice among a number of possible ways of bringing about the same thing. Now it follows from these considerations that conduciveness to some end can be a criterion or definition of truth or knowledge only if the relation between being conducive to the end and being true, or known, is a synthetic relation. The relation cannot be made to hold by virtue of the specification of the end. But if the criterion is to do more than point out an accidental concomitant of

truth or knowledge, which might or might not continue to be present whenever and only whenever they are present, the connection between being conducive to the end and being true, or being known, must be necessary as well. And it is, to say the least, difficult to establish the existence of any such necessary synthetic connection; while if it could be established, the question would arise of whether the end here satisfied the condition mentioned above.

2. These considerations may not, however, appear conclusive, and it may well be that there are other arguments which are more important in evaluating the attempt to assimilate all knowledge and truth to theory. This, I take it, is the opinion of Prof. Boas. For in his Carus Lectures[1] he seems to be trying to show that all knowledge contains the elements which theories contain, and is to be evaluated by the criteria which are used in evaluating theories. Prof. Boas tells us that he has always been interested in theories, and especially in the problem of why theories are rejected as unsatisfactory (cf. 421). His lectures are to a large extent devoted to an attempt to answer that question. He also examines various types of explanation, such as causal explanation and teleological explanation, and discusses the relations between adopting one type of explanation as a model and accepting or rejecting a theory. He is concerned primarily, however, with knowledge and with the general question of the relation of the mind to the world. He wants to reject the view that the mind is a passive observer and knowledge a copy or reflection of the world, and to support the view that the mind is an active inquirer and knowledge a series of answers to a series of questions. He wants, moreover, to reject the view that truth can be adequately explained as a correspondence between a proposition and a fact, and he proposes in its place his own view of truth. These concerns are, of course, closely related, but it is far from clear that they are identical. For one thing the terms "theory" and "knowl-

[1] George Boas, *The Inquiring Mind*. La Salle, Ill.: The Open Court Publishing Co., 1959. Pp. xi + 428. All references are to pages in this volume.

edge" do not have the same meaning in ordinary language. For another, it seems that if we did not first have knowledge about a number of things there could be no call for theory. We construct theories to explain or organize certain facts which we know, we erect theories upon a basis of detailed knowledge, we hope that theories will be based upon a broad foundation of knowledge of a subject, and we criticize people who theorize without such a foundation. Nonetheless Prof. Boas wants, if I follow him, to show that the differences between knowledge and theory are not so great as one might think. Since the attempt to use an insight which has proved extremely valuable in one field to clarify problems in another is often a worthwhile attempt, and since Prof. Boas is not alone in attempting to extend to all knowledge the ideas that have proved valuable in clarifying the nature of theory, it may prove rewarding to follow his argument in some detail.

Following his pragmatist teachers (1), Prof. Boas seems to think that what is significant about theories is that a large element of choice is involved in their construction and that they are used for various purposes. On both counts they are open to and determined by means-ends evaluation. Prof. Boas wants to show that this is true of knowledge quite generally. The principle which, as I shall try to bring out, lies behind his arguments, though it is not stated explicitly, is very roughly this: whenever there is a possibility of giving or accepting alternative answers, descriptions, explanations, or theories, then if a specific one of the alternatives is given or accepted, a choice has been made. Prof. Boas also uses the principle that a choice is always made with reference to some end which will (at least in the opinion of the person making the choice) be served by making that choice, and choices can only be justified in terms of the ends they serve. The general line of Prof. Boas's argument is this. He examines the various elements which he thinks are involved in knowledge as well as in theories, and he tries to show how in each case the first of the principles just stated applies. Where the first principle applies the second is also relevant, and Prof. Boas suggests a view as to the ends which are involved in determining what is knowledge. The elements which he finds are problems; perception

or experience; language and sets of categories; methodological rules and models of explanation; and finally, of course, an end or purpose. (This list does not exactly follow any of those given (cf. 104, 210-213, 397) by Prof. Boas.)

3. We may begin with his statement that "all knowledge is an answer to a problem." He elaborates this by explaining that "a problem arises when one becomes aware of a deviation from the rule" (55). "Rule" here is to be construed very loosely (Prof. Boas offers no analysis of the notion) as including what usually happens, what we usually perceive, what we are in the habit of expecting, what an hypothesis or theory leads one to look for, what an established general law predicts, what a methodological principle requires, what we have learned to do, and what we have learned will usually be done by others (cf. 98). Does this description fit every clear case of knowledge? Suppose that as I am sitting in my study my wife calls in from the living-room, "Where are the big scissors?", and I reply, "In the bathroom cupboard." "Are you sure?", she asks, and I say, "Yes, I put them there a few minutes ago." She goes and gets them from the cupboard. Now it is plausible to say that my wife's coming to know where the scissors are is an answer to a problem which was raised, perhaps, because they were not where they are as a rule. Is my knowledge in the same sense an answer to a problem? Is it a necessary condition of my having known where the scissors were that my wife should want them and ask me where they are? What deviation from what rule is necessarily involved in my knowing where they were? It may be the case that we only construct theories or offer explanations when something unusual is noticed, but it does not seem plausible to say that we only know something when we have noticed, or thought about, something unusual. (It is interesting to note, in this connection, that Prof. Boas feels constrained to deny that there can be such a thing as random curiosity. "If there were such an activity as random curiosity . . . knowledge as the raising and answering of questions would be untenable" (397). He removes the difficulty by saying that "random curiosity is curiosity of whose orientation we are unaware.") Why could we not argue that if knowledge presupposes a problem

and a problem presupposes a rule then an infinite regress must arise, for if we did not *know* that there was a regularity to which the present case was an exception, we would not be confronted with a problem? This suggests that there must be some knowledge which is not an answer to a problem, which comes to us whether we care about it or not, can use it or not, and which is not open to means-ends evaluation. Prof. Boas offers a number of considerations to show that this is not so.

4. I have already mentioned that Prof. Boas rejects what he calls the "copy theory" of knowledge. Since he is content to characterize this theory by using vague metaphors [e.g., "the truth is not absorbed by a neutral mind from a completely objectively determined set of possible objects of knowledge" (329)] it is not quite clear just what he is rejecting. But we can get some idea if we look at his views on perception. He has a number of points to make. (i) What has been called "direct" or "immediate" experience or perception is not by itself knowledge. Sense data are "inarticulate and say nothing" (326; cf. 27 f., 329). If the data of perception are to give us knowledge they must be described or categorized. Until this is done they are irrelevant (23; cf. 82-83). (ii) Prof. Boas accepts a kind of sense-datum view of perception. What we perceive is a result of a "transaction" between the stimulus in the external world and the organs of the perceiver. Perceptual data "have characters which differentiate them from either the physicist's conception of a material thing or an image, dream, or hallucination. They are a third kind of thing or event" (31). Prof. Boas does not draw from this theory any of the sceptical conclusions which are sometimes drawn from it. In fact he expressly repudiates such scepticism (cf. 276, 297). (iii) Our sense organs are instruments of observation, on a par with microscopes and yardsticks (79, 216). In considering the reliability and neutrality of perception, therefore, we must never overlook the "contribution of the instruments of investigation to the facts" (85). (iv) Perception both selects and distorts. Prof. Boas draws attention to facts established by psychologists which lead to the conclusion that "we see in part what we expect to see or have reason to believe will be there" (41).

He also reminds us that painters make finer sensory discriminations of colors and shapes than the rest of us do, and he says that in general what we notice perceptually is apt to be determined in large part by our interests and aims (10, 19, 328 f.). Lawyers and scientists will also attest to the fact that in perception there is usually interpretation and often distortion (282-283). (v) Last, there is no one uniquely right way of describing, naming, or classifying any particular perceptual datum (cf. 13, 307, 327). Confronted with a red patch I could describe it as red, or as colored, or as a patch, or as irregularly shaped, and so on.

These considerations support the view that even in perception there is more to knowledge than meets the eye, and in particular there is selection. Any given physical stimulus may result in different perceptual data, and the differences will depend not only on external conditions of observation but on subjective factors such as expectations, habits, and interests as well (cf. 328 f.). This is why we do not simply "absorb" knowledge like a blotter, and this is at least partly why even my knowledge—of where the scissors were—involved selective perception, which was directed, however unconsciously, by habitual interests and needs. Would I have known, for instance, where the copy of the latest fashion magazine was? I might not have seen it even if it had been before my eyes. Because the selectivity of perception is not a logically necessary selectivity but one which can be discovered empirically and which we can learn to correct, as artists learn to discriminate finer shades of color (331), we are entitled to say that there is choice in perception. (Here Prof. Boas uses the first of the principles mentioned in section 2 above.) This is true even though the choice is largely unconscious (cf. 10) and even though the range of choice is not unlimited. The physical stimuli within our perceptual field do exert some control. Perceptual data are thus subject to the same kinds of selection that is involved in choosing the relevant data for a scientific theory (cf. 272-273), and "we can no longer accept the data of perception as absolutely impersonal records of objective proof . . . The human equation . . . must enter our calculations at this point." (52)

There are several comments to be made on Prof. Boas's views.

First, he takes no account at all of the numerous criticisms that have been made of the sort of theory of perception which he espouses. I shall not repeat them, since they are familiar enough; but one might have expected some consideration of them. Second, Prof. Boas has not shown that there is any element of choice in perception as opposed to attention. He has not distinguished between what can meaningfully be said of attending, scrutinizing, and examining, and what can be said of hearing, seeing, etc. We can certainly choose to do the former: attending, scrutinizing, and examining are voluntary activities, as are looking, peeping, peering, watching, listening, and touching. But seeing (or failing to see), hearing, etc., are not in the same sense voluntary. One might choose to put oneself in a position to see or hear something, but it does not make sense to speak of choosing to see what is before one's eyes or of choosing to see (say) the colors rather than the shapes. Failures to notice or hear, oversights, and odd blindnesses are not voluntary: they are almost paradigm cases of involuntary happenings. What the "selectivity" of perception amounts to, then, is that sometimes we do not see everything that is in front of us, though we would have seen it if we had not been so blind. That perception is "selective" in this sense, however, does nothing to show that means-ends evaluations enter into it. An appeal to "unconscious choice" here seems to be no more than an expression of determination to speak of choice where it is inappropriate to do so. And to say that means-ends evaluations enter into attending and examining is only to say in a different way that they are voluntary activities. Third, nothing that Prof. Boas has said aside from his acceptance of a form of sense-datum theory (and he does not, as I mentioned, bring this to bear on the question) has done anything to show that the data of perception cannot be used for "objective proof" of matters of fact. He has drawn our attention to our liability to oversights and hasty interpretations in perception, but he has also said that these mistakes can be corrected. Presumably this means that they can be corrected by looking again or by using the testimony of others. If so, then our second looks or the testimony of others derived from their perceptions must count as "data of objective proof."

What, otherwise, could be meant by "objective proof"? Surely there are ultimately nothing but perceptual data by which to correct perceptual error; and Prof. Boas has abjured the scepticism that would result from suggesting that such errors can never be corrected. Fourth, Prof. Boas's view [point (v) above] that there is no one, uniquely right, description or classification of a perceptual datum requires more discussion. This is a crucial point for his theory. It provides the basis from which he concludes that the description or classification of sense-data is a matter of choice and therefore subject to means-ends evaluation. Hence it is surprising that no account is given of what is meant by speaking of "right" descriptions or classifications, or of how we establish that any description or classification is *a* right one, let alone *the* right one. Some suggestions are made as to how we recognize or identify physical objects (cf. 99, 311) but these suggestions are not generalized, and it is hard to see how they could be extended to explain how we know the names of colors, tastes, sounds, smells, and private sensations. The problem of how we know that a term can correctly be applied to a bit of experience is one of the main problems that the copy and correspondence theories tried to solve. Prof. Boas rejects these theories, but he gives us no alternative theory which tries to answer the questions which they tried to answer.

5. Just as Prof. Boas's remarks on perception were aimed at showing that what we perceive is in large part determined by our choices, so his discussion of fact is aimed at showing that what the facts are is in large part determined by our choices. He begins by giving three definitions of "fact" (though he does not consistently use any of them), one of which is that facts are what declarative sentences "refer to" or "express," another of which is that "facts . . . are what is verbally symbolised in judgments by subordinate clauses which normally begin with 'that'" (80), and the third—the most important—of which is that "fact" means "what is believed to have really happened or to have been the case" (81). He rejects the definition of "fact" as "what has really happened or is the case" apparently because he thinks, though he

does not say—and I do not see why—that if we accept it we will not be able to account for error (81).

His first point is that experience, or perception, does not alone determine the facts. The facts are what we believe, and they must be formulable in words, and perceptions, as we have seen, do not determine what words we apply to them. One requirement, then, for the existence of facts is a vocabulary for stating them. Prof. Boas calls this a "system of categories" (104). As we shall see, he holds that it is possible for us to use a different system of categories from the one we do use. It is therefore necessary (on the principle mentioned above in section 2) to choose a system of categories, and thus means-ends evaluations begin to be relevant to determining what the facts are.

Now it develops in the course of the argument that a fact is not just *any* belief about what has happened or has been the case. To count as a fact a belief must be one which others can have as well as I; it must be one to which others will be led if they use the same methods of investigation and the same criteria of success as I used; one which will emerge as a constant result in anyone's experience (98-102); and one which in some sense terminates an inquiry, even if only temporarily (83; 91). Now inquiry presupposes a problem and is only terminated when we reach what we consider a solution to it. Hence in addition to perception and a system of categories, the existence of facts requires a problem, a method of investigation, and criteria of success in investigation. These taken together constitute what Prof. Boas calls a "cognitive context." Now we obviously have choices about the problems which we investigate, and Prof. Boas argues later that we have a choice of methods of investigation and criteria of success. Hence once again means-ends evaluations will enter into the determination of what the facts are, for means-ends determinations will enter the choices that give us our cognitive context, and Prof. Boas's conclusion is that "each kind of fact is discovered within a cognitive context, and outside of that context it will not exist" (86). Prof. Boas adds that there are limits to the "pragmatic" element in the determination of the facts. Once we have chosen a system of categories, etc., we have no further choice, and

even if we come out with an unpleasant fact we cannot reject it. Hence an unbridled relativism in which "anything can be true" is not to be feared from this theory (96).

Has Prof. Boas shown that choices and means-ends evaluations play a large part in determining what the facts are? (i) It is undeniable that we often choose what areas we shall investigate, and we often choose vocabularies and methods for our research. Does this go to show that the facts we discover would not have existed if we had not chosen to look at the area with those categories and methods? I think this conclusion only follows if we accept Prof. Boas's extraordinary definition of "fact" and bear in mind the various qualifications he makes as to what sort of belief is a fact. But if we keep these in mind then the view that facts exist only within a cognitive context and do not exist outside that context becomes true by definition. The position is this. A fact is a kind of belief—the kind that we have as a result of coming to think that we have satisfactorily solved a problem by using certain methods which others could use and which would lead them to the same belief. This kind of belief only exists within a cognitive context. That is, this kind of belief only exists when we have reached what we think is a satisfactory solution to a problem, by using a method which others could use and which would lead them to the same belief. Briefly, a belief that we have methodically solved a problem only exists when we have had a problem and have come, methodically, to believe that we have solved it. Well, this is undeniable. But it tells us nothing about the facts. We may say that the facts are what we would discover *if* we chose to investigate a certain area and were successful; but it is hardly valid to conclude that the facts do not exist *unless* we choose to investigate. Prof. Boas seems, in fact, to say as much (cf. 94). (ii) Prof. Boas has at most shown that we choose the areas we want to study and that insofar as we can choose methods and criteria of successful inquiry there will be choice involved in determining the *kind* of data which will count as relevant. He himself, however, has pointed out that it is not up to us to choose what specific evidence we find within the limited relevant kind, and that it is this evidence which will

determine the specific belief which we come to consider as fact. Hence, even on his own terms there is a large area in which choice has nothing to say about what the facts are. (iii) If we ask Prof. Boas just how perceptual data occurring within a "cognitive context" determine a specific belief, we get no very clear answer. At one point he says, surprisingly, that beliefs and judgments may be true or false and that "their 'correspondence with fact', as it is usually called, determines their truth" (82); but aside from the difficulty of understanding what this could mean on his definition of "fact," it is not a view he usually takes. We shall see that he tries to explain truth in quite different terms. But the question here raised is nowhere answered, and since it is one of the basic questions which the "copy theory" of knowledge tried to answer, it is disappointing to find Prof. Boas avoiding it.

6. One of the ways in which choice enters into making the facts what they are is, we have seen, the necessity of language. Prof. Boas holds that the linguistic categories and classifications which we in fact use are only one of a number of sets of categories and classifications. He holds further that language itself is selective and forces certain aspects of experience on our attention while obscuring others. (i) Prof. Boas offers a number of interesting illustrations from the history of science to show how we can change the system of categories which we use in interpreting experience (cf. 59-66, 69-74) and how fruitful a change of categories may be for the further development of a science (cf. 312-313). He remarks that the system of categories one adopts will be determined by the uses to which one wishes to put them. Recent studies of concept formation in the sciences have of course made much of this point, but Prof. Boas does not go into any details on the ways in which alternative sets of concepts or classifications are evaluated, and the few things he does say are not altogether clear (cf. 68, 312). He also draws attention to the "pragmatic factor which is often forgotten or overlooked and which determines our descriptions of experience" (13). What we actually say may be determined by considerations of rhetorical effectiveness, personal interests, etc., as much as by the information we want to convey or record. Here, then, are two ways in

which choices must be made in the use of language. (ii) Language itself, Prof. Boas holds, is selective. It is not only (a) that our vocabulary "directs our attention to certain features of the [perceptual] field and neglects others" (10). This is due to the necessary abstractness of language: "any predicate which we may use other than the proper name of what is before us will select out of the very large number of possible predicates one or two or three" (307). There is also the point (b) that "there might be a great variety of ways of both thinking and perceiving, if people were not disciplined into thinking in terms of a traditional matrix of ideas which are crystallized in speech" (44). Now this two-fold selectivity of language has a fundamental influence, not only on what we perceive, but on the ways we expect the world to be. Because "our language is as if it were based on a protophilosophy in which the thing and its attributes are fundamental" (32), we are led to look for things and their attributes in every field we investigate. We are also led to impose certain requirements as to the satisfactoriness of explanations. Prof. Boas instances the theory of an ether, which was "intended to provide a subject for the verb 'to undulate'"; the biological theory of preformationism, which provided a subject for the verb "to grow"; the tendency to organize data concerning cultural phenomena in terms of a thing-like *Geist*; and the tendency to reify abstractions (34-36). These compulsions to interpret all phenomena in terms of the categorial system imposed by language often lead us into difficulties in science and philosophy. For ordinary language can work "without mirroring the structure of the world it describes," and the various forms of that language "cannot be said to give us a picture of an objective world" (45). Hence we are sometimes forced to invent new categories if we are to make progress in inquiry.

I take it that what Prof. Boas means to suggest by these remarks is that ordinary language is like the sorts of classificatory systems which we use in scientific theories. Just as those systems single out some small number of properties as relevant to investigation, so ordinary language selects from among the numberless properties of things and forces us to attend to only a few; just

as classifications in science lead us to look for certain kinds of structures and to expect certain kinds of data, so ordinary language structures our experience and forms our expectations; and just as one classification in science may prove to be less fruitful than some other, so ordinary language imposes on us a classification that may be less fruitful than some other. We can change our classificatory systems in science and, Prof. Boas seems to suggest (cf. 41), we need not be bound by the categories which ordinary language imposes on us. And therefore (in accordance with the principle mentioned in section 2 above) when we use ordinary language we have made a choice, just as we have made a choice when we use some special set of scientific classifications.

Prof. Boas's position on language raises more problems than I can try to deal with here. I shall take up only three points. (i) Granting that various sets of classifications may be possible in a science, and that the scientist may have to choose among them, can ordinary language be viewed as simply one way of classifying things or experiences, in the same sense? I do not think that it can, and my reason is this: One condition which is normally met when we consider any two sets of words to be alternative systems of classification is that the objects which the words are regarded as classifying can be identified and described without any use of words from either of the alternative sets. Where this condition is not met we will not have classification in the usual sense of the term. Now this condition cannot be met for language as a whole. If it is to be met, we must be able to specify and describe the things that are to be classified by language without using any of the terms in it. But since we are now speaking of language as a whole, this means without using any terms. And we cannot even specify, let alone describe, things without using some linguistic devices, for non-verbal modes of referring or specifying, such as pointing, framing, or prominently displaying are (though I shall not argue it here) parts, and necessary parts, of language. Hence ordinary language cannot be a system of classifications in the sense in which, *e.g.*, the various biological classifications based on genesis or morphology or inter-sterility are so. This alone makes it at least very doubtful that there is

any sense in which we can be said to have made a choice when we speak ordinary language. If we were to examine this question fully we should have to ask what sorts of alternative there are to ordinary language, and we would not find much help in what Prof. Boas has to say. (ii) Can we not, however, choose to use or not to use given forms within ordinary language? Can we not come to see a need to reject or reform certain parts of ordinary language? This is a very complicated question, and I shall not try to answer it here. But I do want to point out a difficulty that arises from Prof. Boas's arguments in favor of an affirmative answer. He suggests that ordinary language imposes a form on experience, and that what the facts are is always in part due to the forms imposed by language. If this were true to the extent to which he thinks it is, then it would be hard to see how we could ever discover anything which could lead us to feel a need to revise parts of ordinary language. For on his view the only facts there could be are those which could be formulated in language. Anything outside language, as he often tells us, is simply irrelevant. How, then, can we discover facts which force us to invent new and more adequate terminologies and which lead us to reject the model of interpretation imposed by ordinary language? Yet he tells us that such facts are often discovered (cf. 85-86). (iii) Prof. Boas's remarks on language have the merit of reminding us that there is no simple relation between the ways we think and talk and the world about which we think and talk. They contain, moreover, a number of fertile suggestions about the different ways in which language may be related to the world. Thus the whole treatment of the problems of differentiation and individuation rests on the idea that the principles by which things are treated as being the same, similar, or different are in some way contained within language rather than imposed upon it by existing differences and similarities in things. Again, the suggestion is made that it is not the symbols of language which have meaning in themselves; rather "they acquire meaning through the uses to which they are put" (88). Both of these ideas seem to me to be rich in possibilities of further development, and it is

to be wished that Prof. Boas had been more detailed in his treatment of them.

7. Prof. Boas devotes four of his lectures to an examination of four different principles of explanation. His aim is to show that there are a variety of possible criteria for a satisfactory explanation and that, consequently, a choice must be made from among them. He does not claim that the four he discusses exhaust the field. The first to be considered is the criterion of cause and effect. If we adopt this principle we demand that an explanation show that certain things or events, the "effects," were literally present in other things or events, the "causes," which preceded them in time (cf. 117; 130-131). The second principle he discusses is the teleological principle, which is used primarily in explaining human behavior (133 ff.). The third principle is what Prof. Boas calls "explanation by the principle of perfection." The main exponent of this view seems to be Plotinus, though Prof. Boas interestingly suggests that Spencer's evolutionism and various forms of historicism also use it (160 ff.; 180-182). The fourth principle is that which demands that we find general laws correlating the succession of phenomena. Newton's theory is taken as the great exemplification of the use of this model (183 ff.). Prof. Boas gives numerous historical examples to illustrate the ways in which the acceptance of one or other of these principles affects the kind of evidence sought and the kind of explanation offered. He also discusses various ways in which the principles break down or are found to be inapplicable in certain cases. Thus the causal principle "breaks down . . . between the subjective and the objective" (212), that is, we cannot find mental effects preexisting in physical causes (127 ff.). But the principles are not always abandoned when this occurs. On the contrary, they are often erected into general metaphysical theories, and attempts are made to explain absolutely everything in accordance with them. Against this sort of attempt Prof. Boas directs a number of criticisms. He points out that the meaning of the original principle is stretched in such theories beyond recognition, and the result is liable to be vacuity instead of explanation. For example, the ease with which counter-instances are absorbed by those who

extend the teleological principle to cover all things and events, as being explicable in terms of God's purposes, does not count in favor of that extension. Rather it makes the theory vacuous; and it distorts the meaning of "purpose." "When one has so far extended it that it is attributed to acts which lack the differentiating characters of our purposiveness, then the term would appear to be misapplied" (157-158; cf. 153 ff.). Similar remarks are made about attempts to extend the other principles to cover everything, so that Prof. Boas seems to be arguing that no one type of explanation can in principle be sufficient to cover all the phenomena with which experience presents us. (I say "seems" because I am not clear what he thinks is the position of the principle of explanation which requires that we formulate general laws of the succession of phenomena (cf. 214 and 221).) "My own position," he says,

> is that purposiveness is a recognisable feature of some events and that non-purposiveness is a recognisable feature of others. The correct explanation of a purposive event is teleological; of a non-purposive event is non-teleological. (208)

He adds that every sort of explanation involves generalization (183).

The chapter in which Prof. Boas summarizes his discussions and gives a general account of explanation is most disappointing. He takes no account of the work done on the nature of explanation by people like Ramsey, Broad, Nagel, Hempel, Norman Campbell, and Braithwaite, and his own remarks are vague and not always clearly consistent with views expressed earlier. Explanation, he says, is "the organising of knowledge, and each man is the best judge of when his organisation is completed." Each kind of explanation arises out of "the extension of a basic metaphor." (Is this true even when we use the word "purpose" in its "original and primary meaning" (157) and give purposive explanations of events of which "purposiveness is a recognisable feature"? If so, in what sense *is* purposiveness a recognizable feature of these events?) And each kind of explanation is based on a metaphysical theory (211-213).

What is of importance for us is Prof. Boas's tendency, here

and elsewhere, to treat the various principles of explanation as if they were alternatives among which one could choose. He talks as if a scientist (or perhaps a philosopher) could choose to use just one of the principles or, with him, could choose to use several (cf. 210; 217-221; 233; 323). We must ask what sort of choice is involved.

The question may be put this way. Are the four (or more) principles which determine types of explanation principles of different ways of doing the same thing? Are they, that is, like different methods which one might use to determine whether a compound was an acid or a base? Or are they, rather, principles for the doing of different sorts of thing? Are they, that is, principles which define different goals to be reached, without saying how they are to be reached? Are they to be compared with different techniques and strategies for winning chess games, or are they to be compared with basic rules outlining wholly different games? Merely saying that they are ways of "explaining" is no help, for the question is whether "explanation" always means the same thing. We need not answer these questions here, for whichever answer is correct Prof. Boas is in difficulties. He wants to say that the principles simply lay down different methods for doing the same thing, namely, explaining. Now if this is the correct interpretation of their status then it must be possible in principle for any one of the types of explanation to be given of any event or fact. We must be able to view them as alternative, equally possible, *means*, so that the actual choice between them will depend on which is the most efficient, least expensive, most comprehensive, etc., in any given case. The choice will not be dictated by the nature of what is to be explained. Prof. Boas, however, has argued that this requirement cannot be met. For he has said that there are some events which can be correctly explained *only* by a teleological explanation and some which can be correctly explained *only* by a non-teleological explanation. Therefore he must hold that it is not true that any one of the principles is as applicable to anything to be explained as any other principle. Hence if we must make a choice among them, it will not be a choice among means to a definite end. On the other alternative,

that each principle defines a kind of explanation or goal, the kind of choice that we have to make will not be a choice of means to an end either. It will be a choice of the kind of thing we want to know about. For since each principle can be applied only within a limited area, choosing to use one specific principle will mean simply choosing to investigate the area to which that principle applies. Normally one finds oneself with an interest in some subject and uses the relevant principle of explanation because it is relevant to one's interests; but I suppose that one could choose to study, say, biology because one liked finding and giving teleological explanations. In any case nothing has been done to show that within the area one chooses to study there will be any scope for further choices or for means-ends evaluations. (There are, of course, alternative methods of solving problems within the sciences, *e.g.*, different ways of discovering the elements in a chemical compound, and choices among them may be dictated by means-ends considerations. But Prof. Boas does not discuss this sort of choice of methods, though it may be this that suggested to him that the principles of explanation are methods in this sense.)

If this is correct then the types of explanation cannot be rivals for our affections within an area of study, and selectivity will be present only in the innocuous fact that we have to choose what to study. It may be that teleology and causality are rival principles of explanation in some areas or in some sense; but I do not think that Prof. Boas has succeeded in showing that they are.

8. I have examined some of Prof. Boas's positions concerning perception, fact, language, and explanation. These are all elements in knowledge, on his view, and he has tried to show that a large degree of choice is involved in each of them. I have argued that he has been largely unsuccessful in this attempt. The only clear choices that seem to have been established are those involved in deciding what we will attend to, or find out about, or talk about, or explain. I have also tried to show some of the places where the extension to the analysis of knowledge of concepts derived from the study of theories seems to be more confusing than helpful. And I have indicated some points at which Prof. Boas

has not offered answers to basic questions which the "copy" and "correspondence" theories tried to answer. Prof. Boas discusses several other topics, but they are all subsidiary to his central theme, which is the place of choice in knowledge. To the last part of that theme I now turn.

9. We have been shown a number of places in knowledge at which, it has been argued, choices must be made. We have not yet been told what the principle is on which these choices are to be made. Prof. Boas's final views on knowledge and truth are an attempt to answer this question. Although he holds that the principle of choice is a means-ends principle, he repudiates any "simple pragmatic epistemology." We need very little truth to survive, so that survival-value cannot be the end in terms of which our choices are to be made (381). He also rejects intellectual satisfaction, prediction of and control over the course of experience, power, and aesthetic elegance as ends (392). His own view is roughly this (I bring together here a number of scattered remarks). The inquiring mind seeks stability, simplicity, and reliability in its beliefs. When something surprising or unexpected occurs or appears, the mind is upset: somewhere in its system of beliefs there is something wrong. "Wherever there is a conflict between what one knows and what one finds, one is confronted by error" (385). Error is the "primary cognitive experience," for it is error which starts us on the road of inquiry (384). The mind tries to make an adjustment somewhere so as to prevent further errors. The adjustment may consist simply in abandoning the habit or belief or theory which led to the mistaken expectation or faulty classification. But it need not. We can often explain away counter-instances to theories or specimens that do not fit our systems of classification by calling them illusions or freaks, or by declaring that the degree of failure to fit is trivial (cf. 107). We may be able to invent subsidiary hypotheses which will account for the surprising data but will not involve any other alterations in our system of belief. But though we can talk our way out of surprising or awkward instances in some cases, we cannot always do so. When the instances are numerous and well-attested we cannot dismiss them, and it may be more com-

plicated to go on inventing new hypotheses to save old beliefs than it would be to give up the old beliefs and look for new ones more exactly fitted to the new data. There arises thus a constant interplay between experience and the various requirements of the mind—the desires for stability, simplicity, and reliability. In inquiry we try to reach a balance among these factors, and the goal of inquiry has been reached when that balance has been achieved. The balance is never held for long: surprise, inquiry, establishment of balance, and new surprise, continue for as long as we live.

Prof. Boas therefore suggests as a model of knowledge the idea of "intellectual homeostasis," a sort of analogue to the homeostasis by which our body adjusts itself to changing environments. In the case of the mind the homeostasis sought is an interpersonal one, for we seek to keep our beliefs in agreement with those of our fellows. The mind, Prof. Boas says, "will maintain a balance between the habitual and the problematic, will attend to only what it needs to observe, and yet will be sensitive to just those features of the environment which may endanger that balance" (395). In the search for answers to problems, which is the search for knowledge, "we shall call those answers true which maintain our intellectual homeostasis, and the traditional correspondence with fact need not be invoked at all" (397). The view of truth which this last remark suggests is developed more explicitly by Prof. Boas. Truth, he tells us, is "the consistency of beliefs. A belief is verified when it is shown to be consistent with beliefs already held. Such beliefs are called the facts" (414). The consistency which Prof. Boas has in mind is not mere logical consistency.

> A belief will be held until it is contradicted. But the kind of contradiction involved here is not the internal contradiction which may be discovered in a set of logical statements. It is rather a kind of conflict such as what occurs when a person acts upon a belief and finds that his action is frustrated. There are many kinds of frustration, of which the most common is the failure of an expectation to be fulfilled. (320)

In intellectual homeostasis and the attainment of a consistent set of beliefs we have, then, the goal which is to direct all the manifold choices that must be made in the course of inquiry.

There are a few points which call for comment. (i) Has

Prof. Boas really done away with any need to invoke "correspondence" in his view of truth? How are we to tell whether a given experience is one which either fulfills or does not fulfill a specific expectation? And how do we tell whether an expectation has been fulfilled or disappointed? Here we meet again with the same failure to discuss a basic issue that we found in the failure to discuss how evidence determines a specific belief and how we know whether or not a word can be correctly applied to something. Prof. Boas simply does not try to meet the "correspondence" theory on its own ground. (ii) Is Prof. Boas justified in saying that the essence of truth, on his view, is consistency? His appeal to fulfilled expectations seems hardly to differ from an appeal to verified predictions, and that can scarcely be called an appeal to consistency. (iii) What is the status of Prof. Boas's homeostatic model of knowledge? Following the suggestions of the lectures, I have interpreted it as the goal toward which inquiry is directed and in terms of the attainment of which the various choices which must be made on the way are to be justified. Now this, though it may not be "simple" pragmatism, is pragmatism nonetheless, and it is therefore open to the sort of criticism which I outlined briefly at the beginning of this study. Prof. Boas does not try to defend his view against any such attacks, and it may be that he means it to be taken in a different way. He may mean it, as much of his terminology suggests that he does, as a general description of various types of thought-processes. But if this is how his view is to be taken, then his remarks have not the bearing on the nature of truth and knowledge which he plainly thinks they have. For the concepts of truth and knowledge are not descriptive concepts. They are rather concepts used in evaluating thoughts, in indicating those that we are justified in accepting. A description of how different people do evaluate propositions cannot, of itself, lead to the conclusion that they are evaluating rightly. It would seem, then, that we must take Prof. Boas as offering a pragmatic standard of evaluation. (iv) And if this is so, then I do not see that he has provided any answer to the dilemma which he must face. Can the end or goal be defined without any reference to truth or knowledge? Then what reason is there to suppose that what

serves to bring about that end will be only truth and knowledge? Must some reference to truth and knowledge be made in defining the end? Then the end does not meet the basic condition of means-ends evaluation, for one means is made necessary to its attainment by definition.

If these criticisms are well-founded we must conclude that Prof. Boas has not given us a satisfactory analysis of knowledge or of truth. I have already argued that it has not been shown that the element of choice within any area of knowledge is large; and I think we may conclude that the attempt to analyze all knowledge in terms of the concepts that are fruitful in analyzing theory has not shown that this extension is a rewarding one.

Princeton University.

CLASSICAL REALISM AND THE INTEGRATION OF KNOWLEDGE

FRANCIS H. PARKER

THE "CRISIS IN EDUCATION" is always with us, apparently, and so are the correlative "solutions" to these recurrent "crises." But the present, post-Sputnik "crisis" seems to differ from previous ones in being more concerned with philosophical questions.[1] Such greater philosophical concern does not seem to be accompanied by greater philosophical clarity and competence, however. Rather, educators too often find themselves both abandoning and abandoned by philosophy and thus reduced to the tragi-comic helplessness of the educator at one recent important meeting: "As we gaze down the road ahead into an unpredictable future with faith, courage, and steadfastness of purpose," he intoned, "may we pose some goals and present some challenges for the years ahead."[2] A recent and important exception to this abandonment of philosophical guidance to education, however, is Wm. Oliver Martin's *The Order and Integration of Knowledge*,[3] a work which should serve as a model for the contribution which theoretical philosophy can make to education and other practical endeavors.

The theses maintained in Professor Martin's work are of two quite different types: (1) theses about the natures and interrelations of the various kinds of knowledge and (2) theses about the true philosophy and the false ones. The true philosophy is classical realism, the philosophy of "the Aristotelian-Aquinas tradi-

---

[1] See Robert J. Havighurst, "The Impact of Population Change and Working Force Change on American Education" in *Social Changes and the College Student*, the American Council on Education, 1960, pp. 18-28, especially p. 22. The social predominance of the philosophical factor is due, according to Mr. Havighurst, to the struggle between capitalism and communism plus the stabilization of American technology.

[2] Quoted by Fred M. Hechinger in the education column of the *New York Sunday Times*, July 10, 1960.

[3] Ann Arbor: The University of Michigan Press, 1957, pp. viii + 355, no index.

tion" (15). What is the relation between these two kinds of theses, between Mr. Martin's theory of the order and integration of knowledge, on the one hand, and his classical realism, on the other? Although Mr. Martin's view on this question is not entirely clear, it seems to be the following: "Moderate realism is the most *adequate* metaphysical position to account for the nature and kinds of knowledge"; but "this adequacy, in itself, is not sufficient for demonstrating the truth of realism. Rather it is one *sign*, among others, of its truth." (44) We shall return to this question of the relation between these two kinds of theses after considering them separately. Since my own philosophical background and orientation tend to be similar to Mr. Martin's, the following discussion may present only an insider's view, though one more positively influenced by outsiders than is Mr. Martin's.

(I)

Professor Martin's theory of the order and integration of knowledge consists essentially of a formal scheme and a material order resulting from the application of that formal scheme to certain views of the various branches of knowledge. The formal scheme is, in my opinion, incipiently both the most important philosophical contribution of the book and also the feature whose further clarification and analysis would be most fruitful. My attempts to produce an adequate clarification and analysis of this formal scheme have led me to the conclusion that it is too large and ramified a task for this discussion; here I can suggest only a few of the questions which have occurred to me in connection with it.

This formal scheme consists basically of elements related by certain relations to yield products. Since, as we shall shortly see, the elements are defined in terms of the relations, it is these relations which are basic; and it is also these relations which to me are most unclear. While some of this unclarity is terminological and expositional,[4] some of it is, I believe, logical and systematic.

[4] I would have been helped by the omission of the words "presupposes" and "implies" and by the omission of the introductory and found-

These basic relations are three in number: "instrumental to," "regulative of," and "constitutive of."

"Type A knowledge is *instrumental* to type B knowledge" means, according to Mr. Martin's most prominent definition, that "the truth of some specific proposition of B requires the truth of some (indifferently) propositions of A. Example: Some propositions of the experimental sciences are instrumental to metaphysics." (43) The exact meaning of this relation is here, and in many of its other formulations, somewhat unclear and inaccurate. In the first place, it seems to be suggested that instrumentality is an evidential (logical) relation, whereas analysis of the author's view indicates that it is in fact a discernive and illustrative (psychological) relation. The expression, "requires the truth," in the above quotation suggests that if a proposition is instrumental to another it is logical evidence for it, that, in the example given, metaphysical propositions are verified and falsified by propositions in the experimental sciences. But this meaning is rejected by the author and is a confusion with his other two basic relations. "The idea that [an experimental science] can prove or disprove something . . . metaphysical . . . is incompatible with realism . . . If one kind of knowledge is instrumental to another the former cannot confirm, but only illustrate, the latter." (351) Rather, a kind of knowledge "is 'seen' *through*, but not proved by" a kind of knowledge which is instrumental to it (108). So instrumentality is a psychological, not a logical, relation. In the second place, the words "truth" and "proposition" in the above definition seem to suggest that instrumentality is a relation between true propositions. But surely this is not

---

ational "analysis of 'presupposition,'" since these words are, as the author stresses, very ambiguous and vague, and since the analysis of "presupposition" is not very clear apart from the later discussions in particular contexts. Moreover, the meanings intended by the special terms "instrumental," "regulative," and "constitutive" are often clearer without their use. For example, it seems clearer to say that "the truth of the cosmological proposition is 'seen' *through*, but not proved by, the historical propositions" (108) than to say that historical propositions are instrumental to, but not constitutive of, cosmological propositions.

the case, for a cognition which is a condition of the discovery of a certain proposition need not be a propositional one—and even if it should be, it need not be true. Finally, there is some doubt whether an instrument as a psychological condition is always *necessary* to that for which it is instrumental. While the above definition and some parts of the book suggest that it is, other parts of the book and independent considerations suggest that it is not. While it seems true that formal logic (the use, but not necessarily the knowledge, of it) is a necessary instrument for the attainment of other kinds of knowledge, it seems implausible to maintain that mathematics is a necessary precondition, however useful it may be, to theological knowledge; yet mathematics is listed (318) as "instrumental" to theology. Moreover, while Mr. Martin maintains that "without the instrumentality of sense metaphysical knowledge is impossible" (108), his statement that "phenomenological [i.e., empirical] concepts and facts are the means (but not the only means) by which one discovers metaphysical concepts and forms propositions" (105) suggests ambiguously that no particular instrument may be necessary—here the reference is apparently to the sufficiency of theological insights for the acquisition of metaphysical knowledge. Whether an "instrument" is by definition necessary, sufficient, or both thus seems unclear. Perhaps the safest interpretation is that the relation of "instrumentality" means the psychological sufficiency, but not always necessity, of a cognition of a certain type to the discovery of a proposition of another type.

"Type A knowledge is *regulative* of type B knowledge" means, according to Mr. Martin's most prominent definition, that "the truth of some (indifferently chosen) propositions of B requires the truth of some specific proposition of A. Example: Some propositions of metaphysics are regulative of the experimental sciences." (43) Here the corrections just suggested in connection with the relation of instrumentality are unnecessary; the relation of regulativity is a logical relation between propositions or, more generally, a logical relation between autonomous sciences each of which is a group of propositions. But the specific nature of this logical relation as that of determining possible but not actual

truth-value is made clearer by other definitions. " 'Type A knowledge is regulative of type B knowledge' means that the actual truth of a proposition of A allows the possibility of asserting the truth of this or that proposition of B" (41), Mr. Martin says, (though here the word "asserting" should be deleted). Thus, for example, the regulative metaphysical principle of non-contradiction is determinative of the possibility but not the actuality of the truth of the propositions of the experimental sciences.

"Type A knowledge is partially *constitutive* as evidence of type B knowledge" means, according to Mr. Martin's most prominent definition, that "the truth of some specific proposition of B requires the assertion of some specific proposition of A. (If the converse is also true, then "wholly constitutive" is defined.) Example: Some propositions of metaphysics are constitutive of the philosophy of human nature." (43) Mr. Martin here clearly means "requires the *truth* of," not "requires the *assertion* of," for a required proposition need not be asserted and an asserted proposition need not be true. The key word in this definition is "evidence"; and accordingly the import of the phrase "some *specific* proposition of B," in contrast to the corresponding phrase "some (*indifferently chosen*) propositions of B" in the above definition of regulativity, while not here clear, is that a "constitutive" proposition is determinative of the *actual* truth-value of a proposition of which it is constitutive—partially determinative if "partially constitutive" and conclusively determinative if "wholly constitutive"—while a "regulative" proposition is determinative only of the *possible* truth-value of a proposition of which it is regulative. Thus, for example, propositions recording actual sensory experiences ("historical propositions") are "constitutive" of the generalizations of the experimental sciences because the former determine the actual, and not merely possible, truth-value of the latter.

In sum: "Instrumentality" is the psychological relation between some awareness and some proposition such that the former is a causal condition (apparently not always necessary) of the apprehension of the latter, and "regulativity" and "constitu-

tivity" are logical relations between propositions, the former concerning possible and the latter concerning actual truth-value.

The elements related by these basic relations in the formal scheme are "autonomous sciences." "A science is autonomous if it arises directly from experience without the *constitutive* mediation of any other kind of knowledge. The term "constitutive" is important, for another kind of knowledge may be "regulative of" or "instrumental to" an "autonomous science."[5] (51-52) This makes one wonder how "the generalizations of experimental science" can form the autonomous science which Mr. Martin says they do (e.g., 317), for they are declared to be wholly constituted by history (e.g., 318), and history is listed as "another kind of knowledge" and an "autonomous science." By the same token one wonders how history can be an autonomous science since it is partially constituted by experimental science (e.g., 318), and how theology can be an autonomous science since it is partially constituted by history and metaphysics (318). More generally, the autonomy of *any* kind of knowledge seems seriously compromised by the fact that autonomy is defined in terms of relations to other kinds of knowledge (the basic relations just discussed) and by the rather frequent assertions that "the kinds of knowledge . . . exist only through an *order*" (31). If this is an order only of external relations (whatever that may mean), the idea of autonomy remains; but the above inclusion of relations in the very definition of the autonomy of a science plus a more general and curious hint of Hegelianism suggest that the order or relation may be internal. "If A and B are elementary and distinct kinds of knowledge, then each is what it is, partly but not wholly, only in relation to the other." (30) "Like any kind of knowledge its virtue lies in its limitations." (177) The other, non-

[5] In his *Metaphysics and Ideology* (Milwaukee: Marquette University Press, 1959, the Aquinas Lecture), p. 6, Mr. Martin adds that an autonomous science "has its own data, its own kind of evidence, its own formal object." This book is concerned with the order and integration of knowledge only secondarily, referring the reader to *The Order and Integration of Knowledge* for a fuller discussion of this topic. The primary concern of the former book with the distinction between metaphysics and ideology is only secondary in the latter book. See below, pp. 561-563.

relational part of the above definition of autonomy—"arising directly from experience"—is surely too vague to be very helpful, and I have not been able to find in this book (or in *Metaphysics and Ideology*) any analysis of this expression.

The relating of the autonomous kinds of knowledge by these three basic relations produces the order of knowledge. Theology, however, is said to lack all three of these relations to all of the other autonomous sciences (318) and yet to fall within the order of knowledge and to be such that some of its propositions "may be incompatible" with some propositions of other kinds of knowledge (319). Is theology related to other kinds of knowledge by a fourth relation not presented; or is it that theology (Mr. Martin means revealed theology), "the knowledge which is faith, and which transcends reason, has, because of its nature, a prerogative that is unique . . . and hence . . . transcends, but does not contradict, the order of knowledge *qua* order of knowledge" (320); or, finally, is theology really related, Hegelian-wise, just by negation? Some of the autonomous sciences are related by instrumentality, some by regulativity, and some by constitutivity. All of the autonomous kinds of knowledge save metaphysics and revealed theology (these are the two "domains" of the "ontological context") are "positive" in that they study aspects of being in abstraction from being itself. And when a positive discipline is combined with an ontological discipline, then we have a "synthetic" or "integrative" kind of knowledge. Such synthetic disciplines are necessary in order to effect a return from modes abstracted away from being to the being from which they were abstracted. The ontological and the positive discipline are each partially constitutive of the synthetic discipline which they form, and they are conjointly wholly constitutive of it; i.e., the evidence for the propositions forming the synthetic discipline is drawn wholly from the synthesized disciplines. Thus the evidence for the propositions making up a philosophy of nature is drawn from the metaphysics of nature ("cosmology") and experimental science. Synthetic disciplines may be of different degrees of generality; thus the philosophy of man, which is the integration of the metaphysics of man with experimental psychology, is a part

of the philosophy of nature or "natural science," which is the integration of cosmology with experimental science in general. And integrative disciplines may be of different degrees of logical derivativeness; thus the philosophy of nature, itself an integrative discipline synthesized as just indicated, may in turn become synthesized with ontology, this time the ontology of value, to produce a second order synthetic discipline, or set of disciplines, the "moral" or "practical" or "social" sciences (**346**). The number of species and the number of logical levels of such synthetic disciplines thus seem, and quite rightly so, indefinite.

It is here, in dealing with synthetic or integrative disciplines, that the book is at its best; and this best is very good indeed. The author is very illuminating in his diagnoses of the historical breakdown of the integration of knowledge into the contemporary disintegration of knowledge with its accompanying war between the disciplines, and his discussions of the relations between metaphysics and the special disciplines are extremely helpful. While naturally stressing the necessity of ontology in every synthetic or integrative discipline, since some aspect of ontology is by definition an essential ingredient in a synthetic discipline, he also, unlike many philosophers in the Aristotelian-Thomistic tradition, stresses the freedom and autonomy of each of the positive sciences within its own domain and criticizes such like-minded philosophers as Professor Maritain and Reverend Klubertanz for tending to reduce the positive sciences to metaphysics (**302-316**). "When experimental science is denied its rights, there is 'philosoph*ism*'. When metaphysics is denied its rights there is 'positiv*ism*' . . . As evidence metaphysics . . . is irrelevant so far as the confirming or disconfirming of [scientific] generalizations . . . the experimental scientist knows this, even if he doesn't know *why* this is so. He rightly insists upon his freedom, his freedom *from* the metaphysical. *His right is the philosopher's duty not to interfere.*" (**244-245**) "The freedom to 'construct' that he says he needs is a freedom he quite legitimately has. This freedom . . . follows necessarily once the 'object' of experimental science is understood [as] the mobile abstracted from being." (**298**) Correlatively, the positive scientist is given his due in the quarrel

over the relativity of truth. "A positive science is necessarily relativistic . . . for it is essentially concerned with a mode of being *qua* mode . . . truth in mathematics is simply 'consistency' . . . Likewise, . . . the experimental scientist may identify the 'true' with the 'useful'. The only error would be to insist that this is all 'truth' can mean. This would imply that . . . a mode is identified with being . . ." (231) Chapter 8 especially is a strong and helpful account of the relation between a positive science, metaphysics, and the philosophy of that science. Whether or not this account is acceptable to philosophers and philosophers of science, the assimilation of this chapter would do much to better relations between teachers of philosophy and of science.

In this order and integration of knowledge, however, there is, at least initially, a problem of types involved in having metaphysics both "one of the kinds of knowledge integrated" and also "responsible for the integration" (289). While I think that Mr. Martin is correct here, I am troubled by the fact that he tends to smooth over this problem instead of dealing with it fully. "There is nothing strange," he says, "about metaphysics being an integrative factor and at the same time one of the kinds of knowledge integrated. The reflexive function is found in other respects. For example, knowledge about the order of knowledge is itself one of the kinds of knowledge that is ordered" (290). While I think that this is true, I do not think that there is anything strange about it, for it is a case of the paradox of self-reference and also seems to violate the intentionalism which Mr. Martin upholds.

In like manner I am troubled by Mr. Martin's lack of a demonstration that "the analogy of knowledge," which is for him essential to all synthetic or integrative disciplines, does not dissolve into ambiguity and the syllogistic fallacy of ambiguous middle. "In an integrative kind of knowledge, which the philosophy of nature is, there is a lack of homogeneity in concepts. Assuming for the purpose of illustration that the form of reasoning is *Barbara*, the object that one is talking about is the subject of both the conclusion and the minor premise. Since the minor is a proposition of experimental science the predicate must be non-metaphysical, one of the phenomenological context. Yet this predicate will be the middle term which constitutes the link between the two

premises, and will also be the subject of the major premise. But since the major is a metaphysical proposition the common term must there be metaphysical. . . . But how can a term be a phenomenological concept in one premise, metaphysical in another, and allow a conclusion to be drawn without there being either a four-term fallacy or merely a "verbal" connection? It is sufficient for our purposes in this study to point out *that* it must be so. The full understanding of the fact is a matter for further research" (263). And there Mr. Martin leaves the matter. And, as it stands, it seems perfectly clear that every synthetic or integrative discipline, and even the very idea of such a thing, involves the fallacy of four terms. Yet it seems to me that Mr. Martin has gotten into this fix unnecessarily. One might avoid the difficulty by maintaining that the discreteness of an autonomous discipline does not require that its terms differ in meaning from the same terms employed in another autonomous discipline, that its discreteness consists rather in its subject-matter (which is Mr. Martin's fundamental contention), therefore in its propositions, and consequently in its combinations of terms rather than in the meanings of the terms themselves. But even if one agrees with Mr. Martin that the terms themselves must differ in meaning, the difficulty might be avoided by saying that the ontological term (and one of the two terms is always ontological since the problem occurs only in a synthetic discipline one of whose components is by definition an ontological discipline) includes the meaning of the non-ontological term as a part of its own, wider meaning, since ontological terms refer to being itself while non-ontological terms refer only to some aspect of being. This would mean that there would be a common concept to serve as a single, unambiguous middle term occurring as such in the minor, non-ontological premise and occurring as a part of a broader meaning in the major, ontological premise. Thus "analogy of knowledge" without ambiguous middle. Whether or not this suggestion is helpful, something needs to be done about Mr. Martin's "analogy of knowledge" for as it now stands, *with or* "without a doctrine of analogy one is forever locked up univocally within one kind of knowledge" (302).

The application of the formal scheme, consisting of relations, autonomous sciences, and resulting related and synthetic sciences,

to a view of the nature of existing disciplines results in a material order of knowledge. Mr. Martin's views on a number of the existing disciplines seem somewhat remote from those disciplines themselves—at least as they seem to be practised and discussed by their practitioners. While Mr. Martin agrees that "a factual description based upon observation of what the various practitioners of fields of knowledge do provides a check upon any metaphysical analysis" (47), it seems to me that in several cases such observation has been outweighed by metaphysical requirements.

One example of this is his view of mathematics. True to Aristotle and St. Thomas, he insists throughout that mathematics is "the study of quantity *qua* quantity" (the philosophy of mathematics being the study of quantitative *being*) (45), in spite of the fact that "observation of what the various practitioners do" seems to show that "the new conception of mathematics is that it is a 'science of order' or of 'relations'" (161). In spite of, or because Mr. Martin argues that the rejection of the definition of mathematics as the science of quantity rests upon too narrow a notion of quantity (161) and that when it is conceived as the science of relation "these difficulties occur: (1) . . . mathematics becomes a science of relations without anything in particular being related. (2) This means that either mathematics has no object of its own, and is set off uniquely as 'knowledge' by this fact, or it is so conceived that it overlaps or becomes a substitute for metaphysics and/or logic" (162). (1) is not a difficulty at all, for relations may be abstracted from their particular relata without its following either that these particular relata or that all relata whatsoever fail to exist (attention to these would be given by some other discipline and ultimately by metaphysics). And (2) does not follow, for the object of mathematics may be relation or order which is not the formal object either of Mr. Martin's metaphysics as the science of being *qua* being or of his logic as the science of second intentions. Indeed, the definition of mathematics as the science of quantity seems to me neither any longer plausible in the face of modern mathematics nor at all necessary to philosophical realism.[6]

[6] Both these points are made very forcefully and effectively in a recent University of Virginia Ph. D. dissertation, as yet unpublished, by Professor Hugh Caldwell of the University of the South.

Mr. Martin's realism and his view of the relation of mathematics to metaphysics and the philosophy of mathematics do not require that the object of mathematics be quantity; they require only that the object of mathematics be *some* mode of being. Why may this mode of being not be relation? This certainly comes closer to mathematics as it is practised today, and it seems to me to be just as tenable from the point of view of moderate realism—in spite of Mr. Martin's assertion that "the insistence that the foundation of mathematics is the category of quantity is a thesis of realism" (166). It is, indeed, a thesis of Aristotle and St. Thomas; but it seems to me that they ought to be satisfied with the category of relation just as well.[7]

A second case of the difference between Mr. Martin's account of a discipline and its conception in practice—and in this case also its correct philosophical understanding—is that of experimental science. This he defines as "the science of motion *qua* motion" (229), although only "insofar as there are regularities and uniformities" in it (212). This again is faithful to Aristotle and St. Thomas, but it would look odd to most any scientist. What is not faithful to Aristotle and St. Thomas, however, and also at odds with the views of science held by most contemporary scientists and philosophers of science, is the apparent ultra-empiricism and nominalism of Mr. Martin's view of experimental science. The propositions of experimental science are "generalizations" "wholly constituted" by "historical propositions" (223) which are "descriptive of uniqueness"[8] (213). The result is that the generalizations forming experimental science look, in

---

[7] Mr. Martin does say that "Mathematics may be said to deal with order and relations provided a proper restricting adjective is used" (166), but this adjective is "quantitative."

[8] This strange streak of nominalism is accordingly also present in his view of history: "that kind of knowledge in which the uniqueness of past events relevant to human affairs is the end to be sought" (316). This uniqueness seems dangerously ambiguous, for while it may refer only to the unrepeatability of historical events it might be interpreted as meaning that the objects of historical study are without similarities among themselves and thus absolutely incomparable; but this would take the story out of history and place it in the same plight as that in which Hume's analysis of events into unique impressions seems to place all empirical investigations.

Mr. Martin's account, very much like nominalistic enumerations of singular items rather than abstractions of the forms or natures of singular items. And the result of this is "the problem of induction" which Mr. Martin solves only by invoking "probability" which, so far as I can see, is unexplained and unjustified. The question is not whether the generalization must be merely probable, but rather how there can be any generalization at all, even a probable one. It has been a fundamental contention of realism in all its forms that generalizations are impossible without natures, forms, universals, or essences; but these seem mostly absent from Mr. Martin's account of experimental science—even though they are very present in other places in the book and even though nominalism is one of his main villains. His account of the propositions composing experimental science would have been closer both to scientific practice and to classical realism, it seems to me, if he had been truer to his statement that "experimental science . . . is interested chiefly . . . in the common features of unique events" (225) and had followed up and applied his hint that the objects of the experimental sciences are the accidental forms of things. ". . . experimental science . . . works from accidents to properties in the direction of essence, the latter never being obtained except nominally" (264). Scientific generalizations are not enumerations of singulars but true universals because they are abstractions of the forms of things. But they are only probable and never certain because these forms are only accidental and not essential. To abstract the essence of things, and therewith to obtain certainty, is to engage in metaphysics which works "from essence to property in the direction of accidents" (264). "Has our explanation not been too 'empirical'?" Mr. Martin asks (224); and I am forced to answer that it has.

A final instance of the distance between Mr. Martin's account of an existing discipline and that discipline as it is actually practised is the social sciences, especially sociology. The social sciences are "practical" or "moral" sciences, and "a practical science is wholly and completely non-autonomous" or synthetic (316). Thus "there is no such thing as 'sociological evidence' over and above that of experimental [natural] science and the ontological" (347). While I am used to arguing with social scientists that their dis-

ciplines involve ethical and metaphysical propositions both in their foundations and in their ends, I must acknowledge their claim that they can and do abstract from all metaphysical, ethical, and even all practical considerations in the exercise of their own work and that their sciences are therefore both positive and theoretical. I agree that there is such a thing as moral, practical science, but surely there are also factual, theoretical, social sciences. Here it seems to me that Mr. Martin has confused theoretical, non-ethical sciences with their metaphysical and ethical foundations and goals, and that he might better have applied to the social sciences the principle which he applies elsewhere, that of a positive science having as its proper object an aspect abstracted from its total context. But perhaps this disagreement is only terminological, for perhaps he would classify the social, political, or economic scientist under the headings of "experimental psychology" and "experimental science" which he accepts as theoretical and non-ethical disciplines.

(II)

The status intended for the author's classical realism is unclear. Is it this book's official intent that classical realism be taken as true, or is the intent only that it be taken as one example of a philosophical orientation for the order and integration of knowledge? And if the former, does Mr. Martin believe that he has demonstrated the truth of classical realism in this book, or does he mean rather only to assume its truth? The answers to these questions are not clear to me, and I sometimes have the uncomfortable feeling that Mr. Martin is here only "postulating" realism which would of course change it from a "metaphysics" into an "ideology"—on which more later. A number of realist tenets are presented without argument, but others are argued in more or less detail and there is a running polemic against all non-realisms (see especially Chapter 5). Two of the author's most fundamental arguments seem clearly circular.

Mr. Martin's argument for the truth of intentional logic over mathematical logic (34-38), though at times unclear especially concerning what "implies" what and in what sense, is very ingenious; but I think it begs the question. The argument

consists of putting each of the two kinds of logic to "a most reasonable test, namely: Can the logic which presupposes a metaphysics be the instrument by which the truth of the metaphysics is known?" (36) Intentional logic passes this test while mathematical logic fails it. But the test itself presupposes the truth of intentional logic—or at least the falsity of mathematical logic—for mathematical logic does not claim to be an instrument of any truth (outside of logic itself), let alone metaphysical truth, whereas intentional logic does, even defining itself as the instrument of all human knowledge.

In like manner Mr. Martin's much more basic and general argument that "moderate realism is the most *adequate* metaphysical position to account for the nature and kinds of knowledge"[*] (44) seems to beg the question. ". . . the problem of the order of knowledge is that of ordering, and not destroying, kinds of legitimate knowledge-claims . . . it is our duty to recognize as *prima facie* adequate and true those metaphysical principles which are not only compatible with, but make possible the understanding of, all kinds of knowledge. As we have tried to show, such principles are those of moderate or classical realism" (26-27). "A rule may be laid down for which it would be difficult to find an exception: Examine any non-realistic metaphysics and it will be found that some knowledge-claim is not satisfied" (153). Thus, for example, "both idealism and materialism tend to be reductive of some kind of knowledge. Idealism has always had difficulty in taking account of experimental science. . . . Materialism has left no room for ethical knowledge or strict theology" (26). This argument is clearly circular unless there is produced an independent criterion of "knowledge," "legitimate knowledge-claim," or "knowledge-claim"; and I find no such independent criterion in this book—(nor in *Metaphysics and Ideology*). It is unclear throughout the book whether it is all *knowledge* or all *legitimate* knowledge-claims, or just all knowledge-*claims* which an adequate

[*] As mentioned on p. 544 above, Mr. Martin grants that "this adequacy, in itself, is not sufficient for demonstrating the truth of realism," being only "one *sign*, among others, of its truth," and that "unless the truth of realism could be demonstrated independently, it could not serve its purpose in the classification of knowledge" (44).

metaphysics must account for, but the argument remains circular no matter which is the case. If it is knowledge, the materialist and the positivist say that theology, for example, is not knowledge and therefore does not need to be included as such. If it is legitimate knowledge-claims, the positivist says that ethics, for example, as a knowledge-claim is not legitimate and therefore does not need to be retained as such. And if it be only knowledge-claims, legitimate or illegitimate, which the adequate metaphysics must account for, then every other philosophy is as adequate as realism for every other philosophy known to me accounts for all knowledge-claims; positivism, for instance, accounts for the knowledge-claims of ethics, theology, and even metaphysics itself by arguing that they are illegitimate nonsense. To argue that realism is true and these other philosophies false because realism does and these other philosophies do not retain all kinds of knowledge or legitimate knowledge-claims is to argue that realism is true because it is realism and these other philosophies false because they are non-realisms. The question to be dealt with here is: Which claims to knowledge are legitimate and which are not, and why? But I cannot find that Mr. Martin deals with this question, or furnishes any criterion independent of classical realism for answering the question, or demonstrates that his particular list of types of knowledge is the correct one. Until such an independent criterion of legitimate knowledge is supplied, Mr. Martin's argument that classical realism is the most adequate philosophy to account for the order and integration of knowledge remains circular.

Mr. Martin's account of the nature and content of classical realism, while generally excellent, seems in certain respects to be less than fully satisfactory. His summary and somewhat stereotyped expositions, often without discussion of problems, of certain aspects of classical realism (e.g., matter as potentiality and as the principle of individuation) do not seem to present classical realism in a very attractive light to outsiders; but this may be unavoidable if the main business of the book is to be done. His formulation of cognitive identity is misleading and inaccurate. ". . . in knowing there must be an identity of some sort between the knower and the thing known" (25-26); "in knowing a horse there must be some cognitive identity between me and the horse" (22). The neo-

realists are criticized on the ground that their view "requires the knower and the object known to be materially, not merely formally, identified" (122). I can't venture to speak for Mr. Martin, but as for myself I am morally certain that when I know a horse I am not a horse, not even "formally." The relation of cognitive identity obtains, not between the thing known and the knower, but rather between the thing known and the thing itself. Cognitive identity is ident*ification* of a thing. A more serious mistake, it seems to me, is that his view of cognitive identity, like that of the critical realists, makes it impossible to know existents.[10] "The basis of such knowledge is the individual essence or form. An essence can have two modes of existence. When it exists materially in a thing it constitutes a substance, a singular entity. When it exists formally in my mind, then it constitutes the content of my concept of "horse." There is the same form in each case; only the mode of existence is different. The identity relation in knowing is this formal identity of the content of my concept with the essence of the creature known" (23). But if there is knowledge just to the extent that there is this identity, and if this identity involves only the essence of a thing and excludes its existence, then it follows that it is impossible to know the existence of things and therefore impossible to know existents. Here the neo-realists were surely right in insisting that the cognitive relation is one of complete or numerical identity, of existence as well as essence—in spite of the difficulties created in the problem of error.

One aspect of classical realism which Mr. Martin, in common with most classical realists, seems to slight is the justification of value judgments and, specifically, their relation to metaphysical judgments. I believe that 20th century ethical analysis has shown that there is much more difficulty here than most classical realists realize. "An evaluation proposition," Mr. Martin says, "is the product of . . . the phenomenological and the ontological. . . . In this 'practical syllogism' the major premise would consist of either a theological or metaphysical proposition; the minor of a historical proposition or generalization [i.e., an empirical, factual proposi-

---

[10] See John Wild (ed.), *The Return to Reason*, Chicago: Regnery, 1953, pp. 162-163.

tion]; the conclusion would be an evaluation" (85). The metaphysical premise here is, ultimately, "that whatever is conforming to being or the ultimate nature of things is good" (86). Mr. Martin's justification of this last statement is that there is no alternative to it. "The reason why there is no alternative is that the denial would leave morals completely negative. There would be no morals at all, for the arbitrary will of man would be final. No standard assumed would be grounded in anything beyond man's subjectivity. However, this latter is identical with nihilism, which is simply man's rebellion against being. Furthermore, it would seem that every great ethical system has presupposed this general meaning of goodness, namely, that conforming to the ultimate nature of things is good" (86-87). This hardly seems an argument. Why would any other standard have to be grounded in man's subjectivity? What about Intuitionism, say G. E. Moore's?[11] And what's the matter with man's subjectivity? Why would it have to be man's will that is final, and why would that will have to be arbitrary? And even granting all this, maybe morals are "completely negative." And are there not "great ethical systems" which do not presuppose this meaning of goodness, again Intuitionism, for example? It seems clear that there are unless "being" or "ultimate nature of things" is made so vague as to include anything and everything.

Even if we suppose that this definition of goodness is justified, it is difficult to see how it jibes with Mr. Martin's above-quoted account of the logical justification or derivation of value judgments. The two premises in the derivation are, we saw, ontological and factual; but it seems wrong to classify the proposition that "whatever is conforming to being is good" as either of these, for it contains a value word. Mr. Martin argues that it, and similar judgments, are indeed ontological propositions: ". . . the

[11] Perhaps Mr. Martin rejects Intuitionism as "esoteric": "The notion of 'intuition' would seem no more satisfactory. It may be a name for a type of activity in which metaphysical propositions are pulled down from the ontological atmosphere, but it is not clear at all how it is relevant to the truth or falsity of propositions" (99). Or perhaps on the ground that the Intuitionists conceive of intuition "*not* in abstraction *from* sense experience, as in realism, but as *independent* of sense experience" (134-135).

propositions 'God is good' and 'Nature is good' are not evaluations. The subjects are not particulars that are being judged in terms of a standard. Nature or God, as the case may be, is the judge. Neither is that which is to be judged. Such propositions are ontological. The proposition 'Nature is good' is metaphysical. The proposition 'God is good' is theological, although it may also be interpreted as metaphysical. In saying that 'God is good' one does not evaluate God" (87-88). The word "good" is necessary in the major premise to keep the syllogism from committing the fallacy of four terms, since "good" occurs in the conclusion (here ignoring the above-discussed problem of "the analogy of knowledge"); but calling that premise ontological seems to destroy the difference between ontological propositions and value propositions (even allowing that that premise is not an "evalu*ation*") and to make moral science not a synthetic discipline but a part of the autonomous disciplines of ontology. Furthermore, since the premise, whether it is classified as ontological or axiological, seems to be a definition, what about the "naturalistic fallacy" and the whole problem of the definability of ethical terms? More generally, what about the problem of the justification of the ultimate premises of value judgments? There are many problems here which have received extended and detailed treatment by recent and contemporary analysts which classical realists need to become aware of and to examine.

This problem of the justification of the ultimate premises of value judgments leads to a final and most basic problem: the problem of the justification of the very first premise or premises of a philosophy. The firstness of these premises means of course that they cannot be justified by other propositions in the philosophy, and they must therefore be either self-justifying or not justified at all. The first premises of Mr. Martin's philosophy (metaphysical premises) are regarded as self-justifying as "intellectual intuitions." This intuitional status Mr. Martin dichotomously distinguishes from "postulation": "you can't get metaphysical truth, but only ideology, by the postulational procedure" (115). ". . . moderate realism . . . insists that there are metaphysical protocols, and that metaphysical truth is obtained by abstraction, not postulation" (10). ". . . postulation has nothing to do with

knowing. Rather it is an ideological instrument that serves some non-cognitive purpose"[12] (11). For example, "Whitehead's postulational conception of metaphysics reduces it to an ideological reflection of the 'learning' of a culture"[13] (136). Thus "the realist rests his case on the fact that the evidence for metaphysical propositions ultimately is the 'intelligible' obtained intuitively through sense experience. That there are difficulties attending this notion is not to be denied. . . . But there is no gain in shifting to the arbitrariness of postulation" (136). Here postulationists would object that they do not "*shift*" to postulation since realism is itself postulated, either its first premises, or its contention that they are intuited rather than postulated, or both. And they would add that there cannot be, by the very nature of the case, any evidence for first premises at all, and that they are therefore necessarily postulates. Mr. Martin does agree that some intuitions and some intuitionisms lack evidence, namely those which do not "function in the proper manner through the instrumentality of experience" (115). "The only way to know which intuition is true is to discover which has an experiential base"—thus, for instance, is Descartes' intuitionism rejected (114). But if there are conflicting *experiential* intuitions, "all one can do is wait for further enlightenment" (115). Furthermore, if the intuition is evidenced or justified by an experience, then the question simply shifts to that of the justification or verification of the experience, which is now first and thus, as such, unjustified. Mr. Martin argues that the rejection of evidence for all first premises " 'proves' too much" for "it is an argument for skepticism and *against* all metaphysics as knowledge" (138); but this raises both the question whether his own metaphysics may not therefore fail to be "knowledge" and also the question whether such skepticism may not be true. First premises may of course be regarded as self-justifying as tautologies or logical truths, and the examples Mr. Martin gives of realist metaphysical intuitions indicate that they are such. The truth of the

---

[12] As mentioned above, this thesis is the main topic of *Metaphysics and Ideology*.

[13] For an elaboration of this thesis see Professor Martin's "Whitehead's Philosophy as the Ideology of Consensus Theory," *Educational Theory*, Vol. VIII, No. 1 (January 1958), pp. 1-8.

proposition that "All entities whose behavior is a function of volume are those having a definite size . . . can be obtained through a metaphysical analysis of 'material substance' (entity), 'space,' and 'quantity.' No knowledge of molecules is necessary; or, for that matter, no knowledge of anything in experimental science is necessary" (278). As a matter of fact, the only analysis here required is that of "volume" to see that it entails "size." But tautologies or logical truths are not quite self-justifying; they require as a premise the principle of non-contradiction (or identity), and what justifies it?

Mr. Martin does not, unfortunately, go at all deeply into this most important question of the justification of first premises; his argument is mostly polemic in favor of "intuition" and "metaphysics" and against "postulation" and "ideology." What is needed here is, first, a clear and complete presentation of the problem of justifying first premises and, second, an analysis of the different possible meanings of "postulation." Perhaps it could be shown that there are some postulates which are not arbitrary, as Mr. Martin always regards postulates, but which are literally *demands* with no alternatives.[14] As a matter of fact, he hints at this solution when he says (as was seen above) that "there is no alternative" to the first premise of ethics that "whatever is conforming to being or the ultimate nature of things is good" (86). But saying that there is no alternative is not proving that there is none; and, as indicated above, I do not think that Mr. Martin has succeeded in proving it. Such proving would require, it seems, an analysis of human existence, in relation to non-human existence, to show that there is at least one thing which the human being cannot avoid doing or believing..

(III)

What is the relation between Mr. Martin's classical realism and his theory of the order and integration of knowledge? Does

[14] For another suggestion of this possibility see Professor Donald C. Williams' "Ethics as Pure Postulate," reprinted in Sellars, Wilfrid and Hospers, John, *Readings in Ethical Theory* (N. Y.: Appleton-Century-Crofts, 1952); pp. 656-666 (originally published in *Philosophical Review*, vol. 42 [1933]).

either logically entail the other? So far as the formal scheme in his theory of the order and integration of knowledge is concerned, the answer seems to be negative. There seems to be nothing about the ideas of instrumentality, regulativity, and constitutivity, nor about the notion of autonomous sciences as ones which arise immediately from experience without the constitutive mediation of any other kind of knowledge, nor, finally, about the conception of synthetic or integrative sciences as combinations of aspects of ontology with positive sciences, which would make them entail or be entailed by classical realism. Nor can I see that there is anything about Mr. Martin's conception of the particular disciplines which involves classical realism. Though his conception of some of them, especially metaphysics and theology, would rule out some types of philosophy such as positivism and materialism, his conception of others of them, say experimental science, would be declared by some classical realists to be incompatible with classical realism itself. Mr. Martin's marriage of his classical realism with his theory of the integration of knowledge is, while licit, by no means fated. Classical realists may consistently reject, and other philosophers may consistently accept, Mr. Martin's theory of the order and integration of knowledge. This theory seems to me to be more than strong enough to stand on its own feet; and it would, I think, convince a wider audience if it were presented and developed in logical independence of, though not necessarily apart from, classical realism. It is also with his theory of the order and integration of knowledge that Mr. Martin makes his most original and constructive contribution to philosophy, a contribution which is urgently needed in today's intellectual and educational disorder and disintegration. While Mr. Martin has already in this book made an important contribution to philosophy and to education, it is my hope that he will in the future strengthen this contribution by further clarifying his basic integrational concepts, by developing an independent criterion of the types of knowledge legitimately to be integrated, and by further analyzing the problem of the justification of first premises, especially with regard to the distinction between "intuition" and "postulation."

Haverford College.

PROBLEMS AND PERPLEXITIES •

The *Review of Metaphysics* offers the following $25. prizes:

26. For the best explication of President Kennedy's statement: "If it is not necessary to change then it is necessary not to change."
27. For the best discussion of the question, "Might yesterday be tomorrow, and tomorrow yesterday?"
28. For the best treatment of the question: "Is the assertion, 'x is speaking nonsense,' prescriptive, empirical or nonsensical?"
29. For the best account showing what contribution, if any, has been made to mathematics by the *Principia Mathematica.*
30. For the best account of the difference, if any, between "The Good is a non-natural quality," and "The Good is a transcendental."
31. For the best account of the difference between the beauty of a work of art and the beauty of an object in nature.
32. For the best account of the category in terms of which "category-mistakes" are to be understood or defined.

Papers should not be more than 1,000 words long, and should be in the hands of the editor of this *Review* no later than May 15th, 1962. Submitted manuscripts will either be published in the *Review* or returned to the authors.

Readers are invited to submit questions. Ten dollars will be paid for each question that is used.

• This section was inaugurated in March, 1960. Questions listed in that and subsequent issues are still open to competition.

BOOKS RECEIVED

SUMMARIES AND COMMENTS *

JOYCE E. MITCHELL AND STAFF

ADAMS, E. M. *Ethical Naturalism and the Modern World-View.* Chapel Hill: University of North Carolina Press, 1960. xii, 229 pp. $6.00—The naturalistic fallacy, properly understood, and the nature of ethical disagreement render classical ethical naturalism untenable. Emotive naturalism, furthermore, overlooks the "semantic dimension" of moral judgments, while logical naturalism fails "genuinely" to produce suppressed imperative premises or to explain away the apparently cognitive nature of the desires and attitudes which present imperatives. Hence, the author has been led by his critical study of naturalism to affirm nonnaturalism in ethics. An interesting final chapter in this resourceful work considers the metaphysical implications of naturalism vis-a-vis nonnaturalism. — J. E. M.

ALBERT, E. M. and KLUCKHOHN, C. *A Selected Bibliography on Values, Ethics, and Esthetics.* Glencoe, Ill.: The Free Press of Glencoe, Illinois, 1960. xviii, 342 pp. $7.50—Some 600 entries are included in the 75-page section on philosophy. Behavioral sciences and other related sources occupy the rest of the volume. The period treated is from 1920-1958. Most entries include short, summarial statements. — J. E. M.

COLLINS, J. *Readings in Ancient and Medieval Philosophy.* Westminster, Md.: Newman Press, 1960. ix, 340 pp. $2.50—A collection of masterly 20th century commentaries on the ancient and medieval philosophers. Many of the pieces have become classics in their own right, such as the essays by Jaeger, Cornford, Crombie and Gilson, here bound together for the first time. Key doctrines in the major figures from Xenophanes to Cajetan are critically studied. This is a novel and valuable source book. — D. D. O.

COX, R. H. *Locke on War and Peace.* Oxford: Oxford University Press, 1960. xx, 220 pp. 35s.—Contrary to the usual interpretation of Locke, Cox argues that Locke's political philosophy has a strong Hobbesian flavor. The state of nature is really a state of war (even though Locke appears to deny this), and the law of nature turns out to be a "con-

---

* Books received will be acknowledged in this section by a brief résumé, report, or criticism. Such acknowledgment does not preclude more detailed examination in a subsequent Critical Study. The Summaries and Comments will be written by the Managing Editor and her staff of assistants, with the occasional help of others. Reports have been contributed to this issue by L. Kent Bendall and Robert C. Neville.

struct of the mind." To justify this interpretation, Cox carefully analyzes Locke's two *Treatises*. He suggests that Locke accommodated his philosophic argument to the prevailing political, philosophical, and religious atmosphere of the day, but that this is only a device for presenting a much more radical position. The reader may not be completely persuaded by Cox's forceful arguments, but he will discover insights and difficulties which must be taken into account for an adequate understanding of Locke's political philosophy. — R. J. B.

DAKIN, A. H. *Paul Elmer More*. Princeton: Princeton University Press, 1960. xvii, 416 pp. $7.50—A biography made up chiefly of excerpts from correspondence of Paul E. More (1864-1937), literary critic, editor of *The Nation* and teacher of classical and early Christian philosophy at Princeton. The central theme is More's religious development from Calvinism through humanism to a final great sympathy with Anglicanism. — R. C. N.

DAS, A. C. *A Modern Incarnation of God*. Calcutta: General Printers and Publishers Private Ltd., 1958. xi, 310 pp. Rs 15 20 s.—Prof. Das argues that Sri Ramakrishna was an incarnation of God. He pits the Hindu doctrine of plural incarnations against the Christian doctrine of unique incarnation, but his notion of incarnation is so alien to the Christian conception that there is hardly a meeting of issues. That Prof. Das easily accepts points we would deem in greatest need of justification, e.g., the psychic ability to make oneself invisible, and argues in great detail for what we would take as simple points, indicates that we have yet far to go in creating a context for significant communication between East and West. The book contains some interesting chapters on the historical background and life of Ramakrishna, and an explication of several of his major theses. — R. C. N.

DESAN, W. *The Tragic Finale: An Essay on the Philosophy of Jean-Paul Sartre*. Revised Edition. New York: Harper Torchbook, 1960. xxv, 228 pp. $1.60—In this paper edition of what is still the most useful introduction to Sartre's philosophy in English, the author has made minor revisions in the text, expanded the bibliography and provided a link between his citations from the French edition of *L'Etre et le Néant* and the recent English translation by Hazel Barnes. — D. D. O.

FULTON, R. B. *Original Marxism—Estranged Offspring*. Boston: The Christopher Publishing House, 1960. 167 pp. $3.00—A thoughtful Christian counter-offensive on the popular interpretation of Marxism as the absolute antithesis of all that is Christian and democratic. The author's explicit intention is to break down the barrier to understanding and communication constituted by that image. He examines the Judeo-Christian heritage of Marxism and traces the influences which led to Marx's estrangement from that heritage. Elements of the heritage which survived the estrangement are then elucidated and the author concludes with an eminently reasonable appraisal of the legi-

timate points of contact and conflict between the two doctrines. — J. M. W.

GILBERT, N. W. *Renaissance Concepts of Method.* New York: Columbia University Press, 1960. 255 pp. $6.00—This is a controlled and enlightening study of the concept of method during the Renaissance. The text is rich in quotations, supplemented by very numerous footnotes. By dint of letting the evidence speak for itself, Gilbert succeeds in deepening the understanding of the Renaissance and consequently of the significance of the methodological innovations that followed it in the 17th century. — S. M. W.

GOERDT, W. *"Fragen der Philosophie," Ein Materialbeitrag zur Erforschung der Sowjetphilosophie.* Köln: Westdeutscher Verlag, 1960. 382 pp. DM 39.50—There is only one philosophical periodical in the Soviet Union, "*Voprosy* Filosofii." This unusual book translates (into German) the table of contents from all numbers of this magazine in the years 1947-56. Significant articles from each number are also represented either in quotation or paraphrase. The result is a representative survey of recent trends in Soviet philosophy. — D. D. O.

HARTMAN, R. S. *La estructura del valor: Fundamentos de la axiología científica.* Mexico: Fondo de cultura económica, 1959. 334 pp. 30 pesos. —An attempt to clarify and establish systematically foundations for a "formal" (i.e., deductive) science of axiology, relating it to the social sciences and humanities as mathematics is related to the natural sciences. — L. K. B.

HAUSMANN, B. A., S. J. *From an Ivory Tower.* vii, 122 pp. Milwaukee: Bruce Publishing Co., 1960. $3.50—Addressed to the non-mathematician, this mainly historical work attempts to bring out the basic philosophical issues in the face of which mathematics exhibits that it has "'no corner on the market' of truth." The author's discussion of theory of numbers is quite good; the chapter on the infinite, however, with its concern for the infinity of God, is perhaps less mathematical or strictly philosophical than one has a right to expect. — J. E. M.

HEIDEGGER, M. *Vom Wesen und Begriff der Physis, Aristoteles Physik B 1.* Milano: Istituto Editoriale Cisalpino, 1960. 111 pp. N. P.—The text of a *Seminarübung* held in 1940 is here published for the first time together with an Italian translation. This is another of Heidegger's creative interpretations of Greek philosophy. The topic is Book II, Chapter 1 of the Physics, three pages in which Aristotle explains the various meanings of nature. Heidegger finds grounds in this text for his doctrine that truth is not an idea or a property of propositions, but the self-revelation of "nature" (equated with his *Sein*). — D. D. O.

HUSSERL, E. *Cartesian Meditations: An Introduction to Phenomenology.* Trans. by Dorion Cairns. The Hague: Martinus Nijhoff, 1960. xii, 157 pp. Paper Dfl. 9.50; Cloth Dfl. 13.25—In spite of the current

revival of interest in Husserl, this is only the second major English translation—after an interval of 25 years. The text is well-chosen since it exhibits Husserl at the height of his career (1929-30) and offers the only concise treatment of the major themes of Transcendental Phenomenology. Prof. Cairns, Husserl's own choice for translator, has produced a very careful, though perhaps over-literal version. — D. D. O.

JUNG, C. G. *The Structure and Dynamics of the Psyche.* Trans. by R. F. C. Hull. Bollingen Series XX. New York: Pantheon Books, 1960. x, 596 pp. $6.00—This eighth volume of the Collected Works of Jung comprises a collection of essays in which Jung struggles with the basic theoretical problems of his psychology. He brings an impressive erudition to his search for concepts, models and explanatory principles adequate to the refractory psychic phenomena with which he deals. In keeping with Jung's conviction that the psyche is "a thing of such infinite complexity that it can be observed and studied from a great many sides," the essays exhibit a variety of approaches, from the relatively empirical to the frankly speculative. The essays span some forty years of Jung's reflection and, thanks to their arrangement in thematic groupings by the editors, present an interesting study in the refinement of his thought and statement. — J. M. W.

KANT, I. *Education.* Ann Arbor: Ann Arbor Paperbacks, University of Michigan Press, 1960. 121 pp. $1.35—This is a translation by Annette Churton of *Immanuel Kant über Pädagogik*, edited by Friedrich Rink in 1803 and appearing in volume 10 of Hartenstein's first edition of Kant's works. With anecdotes and illustrations, and plenty of advice, Kant deals with largely practical problems of the aims and methods of education. He strongly asserts the basic connection between character and training. The translation is smooth and reads easily, although sometimes the theoretical implications of Kant's technical terms do not come through. — R. C. N.

KANT, I. *Observations on the Feeling of the Beautiful and the Sublime.* Trans. by John T. Goldthwait. Berkeley and Los Angeles: University of California Press, 1960. 124 pp. $1.50—A new and extremely readable translation of one of Kant's early works that helps to correct the austere picture of Kant which emerges from a concern only with his critical philosophy. Kant's observations on the differences between the sexes, and his classification of national characteristics are especially delightful. The entire work shows Kant in a more empirical mood than is to be found in the *Critiques*. The translator's introduction is helpful for understanding Kant's personality and early work, though the brief remarks about the critical philosophy are rather superficial. — R. J. B.

KIERKEGAARD, S. *The Diary of Søren Kierkegaard.* Edited by Peter Rohde and trans. by Gerda M. Andersen. New York: Philosophical Library,

1960. 255 pp. $4.75—A selection from the voluminous journals of S. K., grouped under topical headings rather than chronologically. Though there is some overlapping with the already published *Journal* selections (by A. Dru), the present volume, in the main, offers a useful complement. A good translation. — D. D. O.

KWANT, R. C., O. S. A. *Encounter.* (Duquesne Studies No. 11) Trans. by Robert Adolfs, O. S. A. Pittsburgh: Duquesnes University Press, 1960. vii, 86 pp. Paper $2.50, Cloth $3.25—Building on certain ideas of Husserl and Merleau-Ponty, the author advances the hypothesis that the knowledge of personal qualities is epistemologically prior to the knowledge of "thing" qualities. We attain the clearness of things through intersubjective communication. Kwant supports his thesis by showing that knowledge of persons is not reducible to anything else and that all other knowledge is dependent on it. The argument is plausible but would have been more persuasive had the author appealed to some empirical tests. — D. D. O.

KWANT, R. C., O. S. A. *Philosophy of Labor.* (Duquesne Studies No. 10) Pittsburgh: Duquesne University Press, 1960. xi, 163 pp. $5.25—As the author points out, a philosophy of labor can be extremely helpful in illuminating the more general problems of social and political philosophy. For those who are unacquainted with the philosophic treatment of labor, especially in Marx, this discussion may be an aid. However, there is a strong tendency to oversimplify throughout the book and the reader frequently feels that the author is by-passing the really difficult issues. The positive thesis is that humanization of the labor world is an urgent task. — R. J. B.

MAC IVER, R. M. *Life: Its Dimensions and Its Bounds.* New York: Harper & Brothers, 1960. xv, 144 pp. $3.00—Using a dialogue form, Mac Iver portrays a series of discussions among an intelligent group of specialists. The topics discussed include the nature of life, creation, sex, sensitivity, as well as the responsibility of the modern scholar to confront fundamental problems that extend beyond his limited field of inquiry. Mac Iver does catch the spirit of an informal discussion among specialists, but one wishes that he might have included a philosopher to help order the discussion and to clear up conceptual confusions. — R. J. B.

MORROW, G. R. *Plato's Cretan City: A Historical Interpretation of the Laws.* Princeton: Princeton University, Press, 1960. xxii, 623 pp. $12.50—A comprehensive study of Plato's last and most difficult work. Professor Morrow's theme is that in the *Laws* Plato is applying his basic principles to the precise historical conditions of his time, out of consuming interest in the moral and political development of mankind. The concept of the "mixture" or "mean," as developed in the *Politicus* and *Philebus*, is treated as the key to the philosophical interpretation of the *Laws*, law itself being the "limit"; human nature, the natural environment, and existing laws and customs, the "unlimited." Prof.

Morrow places the weight of his interpretation on the latter, since a determination of the actual character of Greek institutions, as Plato knew, seems essential to a correct analysis of the "composite" institutions we find in the *Laws*. — J. A. B.

MÜLLER, G. E. *Hegel: Denkgeschichte eines Lebendigen*. Bern: Francke Verlag, 1959. 416 pp. N. P.—More a biography of the man and his times than a doctrinal study, this impressive volume presents a lively portrait of Hegel and an argument for his contemporary relevance. Prof. Müller sets out to explode the "myths" about Hegel's personality and philosophical achievement. The first part of his program succeeds admirably. By including many letters to friends, love-letters, poems and private papers, he builds up the picture of an interesting and attractive personality. A second volume on Hegel's philosophical significance is promised. — D. D. O.

MUELDER, W. G., SEARS, L. and SCHLABACH, A. V. *The Development of American Philosophy*. (Second Edition; First Edition by Muelder and Sears) Boston: Houghton Mifflin, 1960 (1940). xi, 643 pp. $7.00—A useful source book, which includes introductory notes and supplementary bibliography. Part Eight of this volume ("Philosophy and Science") is entirely new, while some of the other parts contain new selections. Parts Five and Seven ("The Idealist Tradition" and "Naturalism and Realism") are more complete than others, but inevitably omissions are notable. — J. E. M.

NORTHROP, F. S. C. *Philosophical Anthropology and Practical Politics*. New York: Macmillan Co., 1960. x, 384 pp. $6.50—According to the author, philosophical anthropology offers the key to better relations among nations, inasmuch as its objective, scientific view of men seen in their cultural contexts eliminates guesswork in the solution of problems arising among conflicting cultures. Brilliantly imaginative yet realistic, Prof. Northrop's theory takes note of the dependency of cultural institutions (second order facts) upon the epistemological orientation of a people towards the facts of physical science (first order facts). His primary value being world peace, he advocates understanding other peoples through understanding their epistemology. A rare combination of both social science *and* philosophy, this challenging work includes several reprinted essays. — J. E. M.

PIGUET, J.-C. *L'Œuvre de Philosophie*. Neuchâtel: Baconnière, 1960. 118 pp. N. P.—M. Piguet believes that philosophy is, in a strict sense, a compromise between science and art. In the course of establishing this thesis he makes some interesting suggestions on the question of ordinary language. For him this idiom is the "culture language"; it embodies the cultural experience of an age; it can be neither technical nor colloquial; it is the language of the *honnête homme*. It is also the basic "translation language" with which all other technical and artistic idioms must be ultimately coordinated. — A. P. D. M.

RENWICK, A. M. *The Story of the Scottish Reformation.* Grand Rapids: Wm. B. Eerdmans Publishing Company, 1960. 176 pp. $1.25—In this brief and readable survey of the Reformation in Scotland, Professor Renwick succeeds in supplying both a sketch of the pre-Reformation church in Scotland, and an account of the entanglements of blood, religion and politics involving the Scottish throne. Frankly written from the Protestant point of view, the author demonstrates restraint in his treatment of the role of Mary Stewart, and gives an interesting narrative of John Knox's part in bringing about the reformation of the church.—S. M. W.

ROSENTHAL, F. *The Muslim Concept of Freedom prior to the 19th Century.* Leiden: E. J. Brill, 1960. viii, 133 pp. Dfl. 19—In this brief work of modest pretensions, the author brings together Islamic texts relevant to freedom from a great variety of sources. He ventures very little analysis or interpretation. Each chapter is copiously footnoted. Given its purely scholarly intentions and limitations, the work should provide a valuable aid for those interested in the study of this field. — J. M. W.

ROUGIER, L. *La Métaphysique et le langage.* Paris: Bibliothèque de Philosophie Scientifique, 1960. 252 pp. NF 9.50—Classical metaphysics from Plato to English empiricism arises out of the bad syntax and bad semantics of the Greek language. Phenomenology and existentialism arise out of similar excesses in German. The thesis, familiar to English readers, that all metaphysicians are duped by the poor logical form of ordinary language, is argued against an impressive command of the history of philosophy and with a degree of vehemence reminiscent of adolescent logical empiricism. — A. P. D. M.

SCHELER, M. *Die Wissensformen und die Gesellschaft.* Second, revised, edition. (Vol. 8 of the complete works) Bern: Francke, 1960. 536 pp. Fr. S. 38—The text of this new edition of Scheler's pioneer work in the sociology of knowledge has been corrected in a few places. There are also about 50 additional pages drawn from Scheler's relicta which throw new light on the themes of the original study. The most interesting of these additions are the pages which spell out the differences between Scheler's phenomenological approach to problems about values and the positivistic approach of Max Weber. — D. D. O.

SCHNEIDER, H. W. *Morals for Mankind.* Columbia University of Missouri Press, 1960. xiii, 82 pp. $2.50—Three lively lectures that range over a wide variety of ethical topics, including the science of ethics, the ways in which religious experience and secular ethics can complement each other, and the possibility of a universal moral community. Though the discussion is refreshing, there is too little opportunity to explore carefully some of the knotty issues that are raised. The lectures concern the "science of ethics," but there is hardly any clue given concerning the nature or possibility of such a science. — R. J. B.

SEWELL, E. *The Orphic Voice.* New Haven: Yale University Press, 1960. ix, 463 pp. $7.50—For Miss Sewell our apprehension of the world is basically through myth. Art, language, and even mathematics, rightly understood, are kinds of myth. This book centers upon those poets and biologists who share common goals by virtue of their use of the primary form of myth, i.e., "world-language." The major part of this book deals in these terms with such thinkers as Bacon, Linnaeus, and Rilke. — J. A. B.

STACE, W. T. *Mysticism and Philosophy.* Philadelphia: J. B. Lippincott Co., 1960. 349 pp. $6.00—A sensitive and intelligent inquiry into the nature of mysticism, with special emphasis upon the question as to whether mystical experience is subjective only, or can reasonably be said to refer to an objective reality. There are also careful and valuable discussions of the relation of mysticism to religion and ethics, and of its implications for logic, language, and a theory of immortality. — J. A. B.

STRELLER, J. *Jean-Paul Sartre: To Freedom Condemned, A Guide to his Philosophy.* Trans. from the German by Wade Baskin. New York: Philosophical Library, 1960. 163 pp. $3.00—This is an expanded glossary of some 37 key concepts in Sartre's *Being and Nothingness.* It is too sketchy and unsystematic to stand alone as an introduction to Sartre's philosophy, but it may prove helpful to those already engaged in a study of his main work. — D. D. O.

THALHEIMER, A. *Existential Metaphysics.* New York: Philosophical Library, 1960. v, 632 pp. $7.50—According to Thalheimer the proper method of metaphysics is first to define clearly "existence" or "reality," and then to test all the things one can think of against this definition. One can thus come to a decision as to whether or not these things exist. It is in this sense that his metaphysics is "existential." "In the tradition of the Seventeenth Century system builders," this work develops a thesis stated in the author's published doctoral dissertation of 1920. — J. A. B.

WEISS, P. *The World of Art.* Carbondale, Ill.: Southern Illinois University Press. 1960. ix, 193 pp. $4.50—Brief though it is, this book deals with the central issues of a philosophy of art. Some startling theses are advanced, e.g., that "beauty" is a predicate and that the arts create their own spaces and exhibit becoming. The role of the artist is sympathetically contrasted with the roles of scientists, philosophers, religionists and politicians. To accept this theory in its entirety is to commit oneself to the arguments advanced here and elsewhere for the four modes of being, their functions and interrelationships. But whether or not these arguments are accepted, the reader will be illuminatingly struck by the author's insight into the spirit and concerns of art throughout the ages, and by his masterful integration of these in a systematic philosophic treatment. — J. E. M.

Classics in Philosophy and Ethics. With Introductory Reading Guide by C. E. M. Joad. New York: Philosophical Library, 1960. xxvi, 313 pp. $6.55—Intended as a course for beginning students in philosophy, this anthology consists of three "Books": "The Search for Understanding," "Ethics," and "Practical Philosophy." The latter is a hodge-podge—largely of moral advice—with selections from Buddha and Christ, among others. Although the selections are representative of diverse positions, both old and new, they are too short to be informative, and some of them might easily be misleading. — J. E. M.

The Concise Encyclopedia of Western Philosophy and Philosophers. Ed. by J. O. Urmson. New York: Hawthorn Books, Inc., 1960. 431 pp. $12.95—As successful as a book of this type could be, with one exception: the selection of recent and contemporary philosophers is all too arbitrary, with its heavy emphasis on British academics reflecting the array of mostly British contributors to the volume. Many fine photographs are included. — J. E. M.

Sinn und Sein: Ein philosophisches Symposion. Ed. by Richard Wisser. Tübingen: Niemeyer Verlag, 1960. xv, 860 pp. Paper, DM 48; Cloth, DM 54—In what is probably the most unwieldy volume of essays ever published, 50 contemporary authors address themselves to aspects of a theme whose generality invites an indefinite number of specifications: Being and Meaning. The closest thing to a perceptible trend in these various essays is the marked influence of Husserl and Heidegger. Authors from many countries have contributed, but with six exceptions their work is presented in German translation. — D. D. O.

Bacon, F. *The New Organon.* New York: Library of Liberal Arts, 1960. xli, 292 pp. $1.35.

Copleston, F. C. *Medieval Philosophy.* New York: Harper & Bros., The Cloister Library, 1960. 194 pp. $1.35.

Figgis, J. N. *Political Thought from Gerson to Grotius: 1414-1625.* Intro. by Garrett Mattingly. New York: Harper Torchbooks, The Academy Library, 1960. xxviii, 290 pp. $1.75.

Spinoza, B. *How to Improve Your Mind.* Elwes Trans. Notes by D. Runes. New York: Philosophical Library, 1956. 90 pp. $2.75.

Announcements

Announcement has been made of the forthcoming Interamerican Congress of Philosophy to be held in San Jose, Costa Rica in July 1961. The Status of Ontology in Present-day Philosophical Discussions will be discussed in the plenary session. Sectional meetings will be held on the philosophy of science, political philosophy, and the history of philosophy, which will devote a special session to the philosophy of Whitehead. There will also be sessions on the teaching of philosophy. Papers must be submitted before April 1, 1961. The fee for delegates who participate in the congress will be $10.00. Each active delegate may present two papers. The official languages of the congress will be Spanish, English, Portuguese, and French. Correspondence should be addressed to Dr. Constantino Lascaris C., Department of Philosophy, University of Costa Rica, San Jose, Costa Rica.

Professor Richard Berstein of Yale University has been appointed to the newly created post of Assistant Editor of this *Review* and will assume his new duties beginning with the next issue.

CORRECTION NOTICE: The price of the book, *Relativism, Knowledge, and Faith* (University of Chicago Press, 1960) advertised in this *Review* (December 1960) should have been listed as $3.75.

Printed in Belgium

"Paul Weiss's achievement in this work admirably blends learning with sensibility, reasoning with insight, and instruction with pleasure. He writes with equal felicity as a philosopher, critic, and artist. His book is the best introduction I know to the subject of an art."—John Gassner.

The World of Art

By PAUL WEISS

The World of Art opposes the view that it is the primary task of art solely to express the artist or to produce pleasure. It rejects the common supposition that art is a purely subjective affair or a kind of make-believe. The artist, it maintains, creates a genuinely new world, with its own characteristic space, time, and dynamics. Nevertheless, every work of art, it says, conveys something of the texture and meaning which existence has for man.

The differences between ethics, science, and art, the distinctive features of the common-sense world, perception and science, the role of the emotions, creativity and myth, the features characteristic of all works of art, the essence of natural as well as created beauty, the problem of representationalism, and the tasks of the critic are among the topics discussed.

6 1/8 × 8 1/2, 204 pages, $4.50

*

Order through your bookseller or from

SOUTHERN ILLINOIS UNIVERSITY PRESS

CARBONDALE, ILLINOIS

MACMILLAN TEXTS COMING THIS SPRING

INTRODUCTION TO LOGIC, second edition

By Irving M. Copi, University of Michigan

The new edition of this lucid introduction to elementary logic features these notable additions: over 600 new exercises, a sharper distinction between logical and ethical issues, a deeper treatment of verbal disputes, inclusion of such topics as performative utterances and operational definitions, a section presenting non-symbolic treatment of hypothetical and disjunctive syllogisms, and a complete set of natural deduction rules.

PHILOSOPHY : THE STUDY OF ALTERNATIVE BELIEFS

By Neal W. Klausner and Paul G. Kuntz; both, Grinnell College

Designed for a problems-type course, this book of topically arranged new text examines the notion of "belief" in key areas of philosophical inquiry. To encourage independent, rigorous thinking by the student, the authors introduce early in the text a unique chapter on elementary logic and, throughout, point up fallacies in reasoning. Copious excerpts from the writings of noted philosophers are included.

PROBLEMS OF ETHICS

By Robert E. Dewey, University of Nebraska; Francis Gramlich, Dartmouth College; and Donald Loftsgordon, Occidental College

Designed for a problems-type course, this book of topically arranged readings presents essays drawn from classical and contemporary writings in the field of ethics. To stimulate independent thought, each positive ethical doctrine is accompanied by a critical selection. A unique feature is the inclusion of selections from the writings of the English ordinary language philosophers—Hampshire, Toulmin, and Hare.

AVAILABLE IN PAPERBACK

THE PHILOSOPHY OF CIVILIZATION

By Albert Schweitzer

MP-12, 347 pages, $1.45

A SHORT HISTORY OF CHINESE PHILOSOPHY

By Fung Yu-Lan

MP-22, 368 pages, $1.65

An approach to the intellectual problems of religion

Introduction to Religious Philosophy

by GEDDES MacGREGOR, Bryn Mawr College

- explores with intellectual objectivity the philosophical problems that religion raises
- takes into account the importance of historical setting
- encourages a more lively appreciation of and involvement with the issues of religion.

"The book is a splendid text. It covers the major topics in the field well and has a personal quality, disclosing much of the spirit and life of its author...."

ROGER HAZELTON
POMONA COLLEGE

"The book is written in an engagingly informal style and with a simplicity and clarity which is most commendable. I can recommend it as a compact treatment of basic issues of philosophy of religion to students in introductory religion courses. Its sectional and topical division of material is most helpful for work at this level."

GERALD COOKE
OBERLIN COLLEGE

366 pages *1959* *cloth $4.50* *paper $2.95*

HOUGHTON MIFFLIN COMPANY • Boston

New York ***Atlanta*** ***Geneva*** ***Dallas*** ***Palo Alto***

UNIVERSITY OF CALIFORNIA PRESS

CONTEMPORARY EUROPEAN PHILOSOPHY

By I. Bocheński. A survey intended for the general reader, it also serves as a compact, authoritative guide. (Cloth $5.00) Paper $1.75

A STUDY IN WITTGENSTEIN'S **TRACTATUS**

By Alexander Maslow. A critical study of **Tractatus Logico-Philosophicus**, whose publication in English (1922) ranked Wittgenstein among this century's most influential philosophers. $4.00

WORLD HYPOTHESES:
A Study in Evidence

By Stephen C. Pepper. The author surveys the whole field of metaphysics, and systematically examines six "world hypotheses"— animism, mysticism, formism, mechanism, contextualism, and organicism. Paper $1.95

At your bookseller, or write for fuller information to :

UNIVERSITY OF CALIFORNIA PRESS

Berkeley 4

MIND *A Quarterly Review of Psychology and Philosophy*

Edited by Professor G. Ryle

With the Co-operation of Prof. Sir F. C. Bartlett and Prof. C. D. Broad

CONTENTS OF ISSUE FOR APRIL, 1961

I. Professor Norman Malcolm: Dreaming: — D. F. PEARS
II. Behaviourism: — C. H. WHITELEY
III. Some Remarks on the Independence of Morality from Religion: — KAI NIELSEN
IV. Possibility and Actuality: — P. LONG
V. The Trouble with Ethics: Values, Method, and the Search for Moral Norms: — A. W. LEVI
VI. The Natural Conditional: — R. N. MCLAUGHLIN
VII. Discussions:
Professor Ayer's "Freedom and Necessity": — R. C. PERRY
Quantifier Rules and Natural Deduction: — E. J. LEMMON
Analyticity Redefined: — M. BUNGE
Doubts about Mr. Pap's Indubitable Existential Statements: — J. E. LLEWELYN
Capacity-Limiting Statements: — G. B. KEENE
A Note on the Problem of Evil: — M. ZIMMERMAN
"To the advantage of everyone alike": — J. T. J. SRZEDNICKI
J. L. Austin: — J. O. URMSON and G. J. WARNOCK
VIII. Critical Notices:
P. F. Strawson, *Individuals: An Essay in Descriptive Metaphysics:* — J. O. URMSON
J. N. Findlay, *Hegel: A Re-examination:* — W. KAUFMANN
IX. Books Received.
X. Notes.

Annual Subscription 25s post free; single copy 7s 6d plus postage

Published for the Mind Association by

PARKSIDE WORKS **THOMAS NELSON & SONS LIMITED** **EDINBURGH 9**

BJPS

THE BRITISH JOURNAL FOR THE PHILOSOPHY OF SCIENCE

Contents for November 1960

ARTICLES

Space and Sense-data: Sir RUSSELL BRAIN

History and Philosophy of Science in British Commonwealth Universities: W. MAYS

The Direction of Time and the Part Played by Free Will in the Concepts of Causality and Condition: H. C. PLAUT

DISCUSSION:

Physics and Chemistry: Comments on Caldin's View of Chemistry: D. K. C. MACDONALD

ARTICLE REVIEWS.

REVIEWS.

Annual subscription 42s, Single copies 10s 6d

PARKSIDE WORKS NELSON EDINBURGH 9 GREAT BRITAIN

The encounter between contemporary faiths and archaic realities

MYTHS, DREAMS AND MYSTERIES

BY

MIRCEA ELIADE

Professor of the History of Religions, University of Chicago

"A thorough knowledge of the history and phenomenology of religion, a profound psychological insight, and a sure grasp of philosophical implications are brought together in an effort to achieve a depth understanding of myths, dreams, and mysteries in their bearing upon human existence. . . . A fascinating study, graphically written, well documented, rich in illustration, and teeming with original ideas that stir the imagination."—WILL HERBERG.

$5.00

At all bookstores

HARPER & BROTHERS, N. Y. 16

The Logic of the Humanities

ERNST CASSIRER

Ernst Cassirer, one of the foremost philosophers of this century, analyzes the basic concepts that underlie our art, our knowledge of history, and our disciplined knowledge of human nature. His philosophy of symbolic forms maintains that culture in its manifold forms is the "mind's place in nature." Works of language, poetry, plastic art, and the myths of religion are seen as the symbols of recognition and remembrance of human kind and as a spiritual manifestation which can be freed from its material covering and awakened to new power whenever a sympathetic and sensitive soul encounters it.

$4.50

The Myth of the State, by Ernst Cassirer paperbound $1.45

Plato on the One

The Hypotheses in the Parmenides

ROBERT S. BRUMBAUGH

The *Parmenides* has long been one of the most controversial of Plato's writings. Scholars, unable to agree on its meaning, have frequently contended that it is not a closely reasoned philosophical treatise. Professor Brumbaugh shows, however, that the series of propositions that constitute the heart of the dialogue are presented in rigorous deductive form as an argument showing the limitations of Eleatic logic.

$6.50

A Whiteheadian Aesthetic

Some Implications of Whitehead's Metaphysical Speculation

DONALD W. SHERBURNE

With a Foreword by F. S. C. Northrop

Primarily an exposition of the author's own aesthetic theory, this book is also an examination of the general adequacy of Whitehead's metaphysical system by testing its capacity to generate fruitful aesthetic analysis. Artistic creation, aesthetic experience, the aesthetic object, the function of art, and the sense in which truth is a notion relevant to art are all considered in detail.

$5.00

YALE UNIVERSITY PRESS NEW HAVEN, CONNECTICUT

SUSTAINING INSTITUTIONS

BRYN MAWR COLLEGE
EMORY UNIVERSITY
FORDHAM UNIVERSITY
FRANCISCAN INSTITUTE
GEORGETOWN UNIVERSITY
GRINNELL COLLEGE
INDIANA UNIVERSITY
INSTITUTE FOR ADVANCED STUDY
INSTITUTE FOR PHILOSOPHICAL RESEARCH
LEHIGH UNIVERSITY
MICHIGAN UNIVERSITY
MONMOUTH COLLEGE
NATIONAL UNIVERSITY OF MEXICO
UNIVERSITY OF NOTRE DAME
PENNSYLVANIA STATE UNIVERSITY
PRINCETON UNIVERSITY
ST. JOHN FISHER COLLEGE
COLLEGE OF SAINT ROSE
SMITH COLLEGE
SOUTHERN ILLINOIS UNIVERSITY
UNIVERSITY OF TEXAS
TULANE UNIVERSITY
VANDERBILT UNIVERSITY
WESLEYAN UNIVERSITY
YALE UNIVERSITY

Printed in Belgium